THE SCHOOL REVIEW

A JOURNAL OF SECONDARY EDUCATION

VOLUME XV
NUMBER 1

JANUARY, 1907

WHOLE
NUMBER 141

THE STUDY OF EXPERIMENTAL PEDAGOGY IN GERMANY

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There is at present a great fermentation going on in the German schools; each man's hand is against his neighbor's. But it has not long been so. Until recently there were in Germany only two ruling pedagogical tendencies. In the *Gymnasien* the humanistic traditions were always active. The common schools acknowledged Herbart's psychology as authority, and imparted instruction in accordance with its principles. But with the famous pronouncement of the German emperor (1900), the enchanted slumber prevailing in the affairs of the schools came to an end. New impetus and vital movement came into all school questions. Many an educational theory, which had hitherto hidden in modest, unknown corners now ventured boldly forth.

Realistic tendencies have become very active. They are the principles which inspire the party of the so-called "reformers." This party would like to abolish immediately the *Gymnasium* with its humanistic tendencies, and occasionally calls in question the worth of the whole instruction of the schools. Gurlitt's book "The German and His School" (*Der Deutsche und seine Schule*) gives a good picture of the aims and motives of the reformers.

But not only has the old struggle between humanistic and realistic ideals broken out again. Entirely *new pedagogical prin-*

ciples have come to the front, and have raised new problems and points of view which summon the higher schools as well as the lower before the tribunal of criticism. On one side, the movement for social education has arisen, which would bring the aims of the school in closer touch with life and problems of society. The champions of this line of thought are Natorp, a university professor, and Bergemann from the school system. On the other side, Berthold Otto, in his "The Course of Study in the School of the Future" (*Lehrgang der Zukunftsschule*), demands an entirely new *method* of instruction. It is to be based upon the natural interests of the scholars and on their being permitted to ask questions, whereas the method in use up to the present has laid upon the scholars only a learn-and-answer compulsion.

It is not to be wondered at that the multiformity of these principles and opinions today in Germany has brought all school questions into an unsettled state. Lively discussions are going on concerning the aim of the school, the curriculum, and the method of instruction. And in these questions a confusion of opinions has arisen which brings to mind the proverb: "Many men, many minds."

In this conflict the universities have begun to take an active part by the formation of a new department of science. They have made of *experimental pedagogy* a tool of pedagogical research and criticism which promises to become of great importance. Over against the discord in views, which in the case of men engaged in the school system has risen almost to the vehemence of party passion, experimental pedagogy sets up objective standards which give sure orientation. Here neither hasty judgments nor the blind opinions of custom are valid, but only the judicial standard of experiment and statistical science. The decision does not rest on the subjective impression of the teacher, which is here one thing and there another, but on the sober results of scientific observation.

This science of experimental pedagogy has sprung from experimental psychology. The reader must not forget what experimental psychology means. It is the latest development of the study of psychology, begun by Gustav Theodor Fechner.

when he discovered psycho-physical methods of measuring. At first it concerned itself only with the measuring of sensations. Wilhelm Wundt, George Elias Müller, and other savants made gradual progress toward the application of the experimental method of measurement and statistical enumeration to the other processes of consciousness. The ever-growing science of experimental psychology has won for itself many fine results. But it worked quietly, and was little known in pedagogical circles, being cultivated exclusively in the laboratories of universities.

Perhaps one might also say that the German instructors were negligent in acquainting themselves with this latest advance of psychology. The psychological interest as such had indeed never failed them for about three quarters of a century. Whether with Comenius and Pestalozzi the teacher avowed the principle of "perception," whether he employed Ziller's formal steps in order to call forth in his scholars effective processes of learning and appropriating, or whether he sought to bring the understanding of the pupil into action by means of developing questions, in every case he was directed to psychology—psychology of perception, of learning and mental acquisition, of understanding and comprehension. For this reason the German teachers have more and more laid it to heart to concern themselves with the current scientific psychology.

On the other side, the latter (I mean the earlier psychology), troubled itself still less about them. Its expounders discussed at the universities the division of the processes of consciousness, the phenomena of association and apperception, the questions concerning the origin of the idea of space, concerning the freedom of the will, etc.; but they discussed no questions of the psychology of teaching in particular. The teachers had to seek out painfully from abstract and learned investigation what they needed or thought they needed for their purposes; one or another of them brought together the knowledge which he had read and searched out into a generally understandable form. This became then the current coin among others of his profession, and supplied the psychological necessities of instruction.

In such a way the one-sided thoughts and the rigid termi-

nology of the Herbartian psychology were scattered broadcast through the lower and middle schools of Germany. Since Herbart's *Didactik* had quickly gained control of the teaching in the common schools, the natural psychological supplement to it seemed to be found in Herbart's psychology. The expert of course knows that Herbart arrived at his clear-sighted pedagogical method rather in spite of his psychology than because of it. But the habit of swearing by Herbart, once admitted, has grown stronger since then with the tenacious strength of long-continued tradition. The pedagogical psychology of the elementary schools has remained stationary at this point, and has, as it were, become set and rigid, although in the meantime the whole outlook of scientific psychology has changed.

This psychological standstill in the circles of elementary teachers must not be wondered at. People had simply become accustomed to see the theory of methods in the common schools supported by the Herbartian psychology. Its concepts had settled into use as familiar and convenient instruments. And that things kept on in the same old way was natural, in view of that general human weakness which makes it always harder to learn the same subject over again in a different way, and to leave the places which one has already occupied, than it is to begin a journey and to learn things that are new: *quieta non movere*. Further, scientific psychology, which in the meantime had gone forward with vigor, still remained engaged in abstract investigations. Educational problems stood as they had stood before, far beyond its horizon. And so nothing came from this direction to arouse the teachers to a fundamentally new way of thinking and learning, by bringing the questions of education in touch with the wider and freer view-points of the university.

Fortunately for themselves, the teachers of the higher branches escaped the meshes of the Herbartian psychology. This happened partly because the higher instruction fitted far less into Herbart's pedagogical method, so that they lacked just that incitement toward the use of Herbart's psychology which had worked so suggestively on the teachers of the common schools; partly, also, because the psychological movement seized the hosts

of the higher teachers much later. Accomplished in their particular sciences,[1] living in them and holding fast to them, they were from the beginning much less inclined to be absorbed in psychology. Indeed, one might almost say that a period marked by lack of confidence in psychology lay not very far behind them.

When at last psychological interest awoke in the circles of the higher schools, it looked naturally for its satisfaction to the university psychology of the time; that is, to a psychology which had long left Herbart behind. Scientific psychology of the time had thrown over Herbart's mathematical presuppositions as to the nature of ideas, the play of their movements, and the construction of other psychological processes out of them. It was the period of introspective psychology; i. e., of that psychology which takes its start from self-observation, and describes exactly the conscious processes which are discovered thereby, and analyzes them. The use of introspective psychology has enriched and deepened pedagogical knowledge. In Lotze's lectures on psychology and Brentano's "Psychology from the Empirical Standpoint" the teachers had splendid leaders. Lotze's lectures have had more stimulating and fruitful effect in Germany, Brentano's work in Austria. Especially were the higher educational circles of Austria influenced by the introspective line of psychology. Among the *Gymnasium* teachers of Germany the psychological current started much more slowly at first, and created much less of a stir. But since the introduction of seminars for the training of *Gymnasium* teachers the young German higher teachers[2] have been well trained in psychology.

It is a characteristic of introspective psychology that it divides into many lines of scientific inquiry. Just this multiplicity brings to the scholar the stimulation of rich material, but must make it hard for the school teachers to understand each other in

[1] The elementary teachers received at the normal schools (*Lehrer-Seminarien*) a general or encyclopaedic training, whereas the *Gymnasium* teachers got a training in a special field at the university.

[2] The young graduates who have passed their state examination must make themselves at home in the questions of practical pedagogy for two years, under the direction of a *Gymnasium* director, before they enter the service of the schools as regular teachers in full standing.

the practical applications to education. Instead of the firm but inflexible psychological traditions of the common schools, the higher schools often showed a weak and uncertain fluctuation with regard to psychological foundations. This fluctuation will continue as long as the *Gymnasium* teachers reach back to the standpoints of introspective psychology for all their psychological needs. In the multiplicity and counter-claims of the opinions which they find here, they lose only too easily all their bearings.

We have already remarked that in the meantime the psychology of the universities has progressed from the stage of the introspective method to a new one. It has advanced to the *experimental method*, and has taken psychological experiment and statistics into its service. According to the earlier method, the faculties of the mind could be characterized only by inner observation. But experimentation gave the means for a much sharper definition and analysis of the mental life; and thus the view of it became for the first time exact and complete. This *objective analysis* also enabled the psychologists to work together in a very different way from that permitted by the earlier subjective analysis. Then the investigation always stuck at introductory questions. Now the psychologists were able to go from result to result with a unified plan. New and fruitful discoveries kept on following each other in those fields of the mental life which are accessible to experimental treatment.

Out of this intense scientific activity a hand was reached out in an entirely unforeseen way to the schools. The self-sufficiency with which psychological investigators had once remained attached to their particular problems disappeared. The experimental method itself gave the impulse toward extending the circle of its investigations from the theoretical atmosphere of the university laboratories into the field of practical life. For this method presses on to seek out and lay hold of new opportunities which admit of the experimental and statistical study of consciousness; so it hit upon the school child. Here many of the conditions of exact observation are united in the most fortunate way; the large number of subjects, the average uniformity of psycho-physical status, the comparison of the psychological

results with the observations of the instructor. And so this experimental work is beginning to atone for the sin of neglect toward the schools which the earlier university psychology had on its conscience. What the teachers had sought so long, and until now so vainly, in scientific psychology, is now offered to them at the hand of this new department of psychological science: sure, objective matter of fact in psychology.

The investigations which struck into this new field began with the *measurements of fatigue among school children.* The experimental psychologists were incited to such measurements through the example of the physicians. The causes, the processes, and the results of mental fatigue (fatigue of attention) produced by school instruction were studied. Out of the, in part, alarming results which here came to light came inferences and demands with regard to what one might call the *framework* of instruction., Questions arose as to the arrangement of the place and time of instruction, the number of lessons and their time, sequence, and hygiene. The results of experimental investigation had given standards right at hand for what ought to take place if instruction were carried on rationally. Exact examination now began as to whether in these respects everything was ordered according to the demands of hygiene and economy of mental effort.

In this way experimental psychology found itself, hand in hand with the physicians, critically opposed to many of the traditional arrangements in the schools. The first close contact of scientific psychology with pedagogical practice was thus given. For the rest, the German public, ever since the measurements of fatigue, has been inclined to lay an altogether too exclusive stress on the necessity of school physicians. It would be at least as much to the purpose to instal school psychologists, trained in experimental methods. It would be their task, not only to control the psycho-physical energy of the students and the use of it, but also to undertake a whole series of other psychological investigations with the school children which would be not less weighty for education. For the investigations of experimental psychology among school children have not remained at a stand-

still with the phenomena of fatigue. Experimental psychologists have come to meet the needs of educational psychology in much deeper ways. They have also extended their researches to the mental peculiarities of the school child, his mode of learning, suggestibility, intelligence, power of memory, accuracy of perception, and so forth. Just as the results of the fatigue measurements had turned attention to the ordering of instruction and of lessons, and had given for these critical standards and warnings ready at hand, so this second series of experimental results brings critical and reforming (or at least noteworthy) points of view to bear on the curriculum. To work out a curriculum rationally we must propose three questions:

a) We must first know what content of consciousness we may assume in the children who are to receive the first instruction.

b) Second, we must be clear on the question of how far their capacity for mental work extends—what can be demanded of it, and what not.

c) Third, it is worth while to consider how their capacity for mental work advances with age, so that in connection with it the instruction also may be gradually deepened and organized with greater coherence.

In regard to all three questions the experimental psychology of the school child has brought rich material, which still calls for sifting and evaluation, from an educational standpoint, and for just this.

The curriculum is, as it were, the skeleton of instruction, just as the number, time, and sequence of lessons belong to its outer structure. The animating nerve of the whole organism (to carry out the figure) is the *teaching method.* "How shall I instruct? May I instruct thus and so?" are the questions which touch every teacher in the higher degree. To answer these, the teacher was until recently driven to the general or local school tradition or to his own experience; that is to say, to sources the scientific worth of which is very contestable. It was a natural step forward to imitate psychology, and utilize its statistical and experimental procedure, in order to decide the questions of

methods of instruction by objective norms, instead of by subjective arbitrariness and instinct. From such views arose an *experimental didactic*, in the narrower sense of the word. Experimental didactics is that educational discipline which makes use of experiment and statistics as tools for the criticism of methods. Experiment is here applied immediately to the educational procedure itself, instead of turning over to the teacher simply facts concerning the scholars or subject-matter, as the abovementioned psychological investigations had done. He must retain or abandon his method of instruction according to the results of experimental and statistical testing, or in some cases correct and modify it by them.

We have just seen that experimental psychology drew the external arrangement of instruction, the curriculum, and the methods of teaching within the scope of its testing and investigation. It is hardly to be expected that it would remain silent on the question of the *possibility of education* and the *aim of instruction*. It has indeed placed the first problem in a new light. On the other hand, some may doubt whether experiment and statistics can be trusted to pronounce also on the aim of instruction. It is enough if they promise clearness concerning the means and presuppositions of education and instruction.

Nevertheless, it is evident that experimental occupation with the question of education and instruction is hardly thinkable without carrying with it certain convictions concerning what one might call the end and aim of teaching, or without having such convictions arise in the course of the investigations and the consideration of their results. The students of experimental pedagogy have a good right to express their convictions. These are at least worthy of more consideration than many phrases concerning the aim of instruction which still pass much too lightly from mouth to mouth and from pen to pen. Every discussion, even the discussion of this last and most difficult pedagogical question, can only gain and deepen when the serious convictions of serious men are expressed and tested by facts.

The author of the foregoing pages has repeatedly lectured before the students of the University of Halle concerning experi-

mental pedagogy. He has given expositions of similar character in the teachers' associations of the Prussian province of Saxony and its neighborhood. He hopes to be allowed to present to the American readers of the *School Review* in a series of articles a more exact picture of the new pedagogical tendencies in Germany than could be given in the above brief mention. He would like to tell in detail what experimental pedagogy accomplishes in relation to the questions of instruction and education, and what it does not accomplish. What is does *not* accomplish as well as what it does accomplish; for the picture must not bear the one-sided coloring of a blind partisan. And, further, he will aim not so much at a colorless report of the new movement as at a thorough critical evaluation.

THE NINETEENTH EDUCATIONAL CONFERENCE OF THE ACADEMIES AND HIGH SCHOOLS IN RELATIONS WITH THE UNIVERSITY OF CHICAGO

NOTE.—This conference was held November 16 and 17, 1906. The paper by Dean Owen was presented at the general session.

SOCIAL EDUCATION THROUGH THE SCHOOL

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It is a commonplace of the present-day educational literature that the school is a social institution. This conception, which is as old as Plato at least, is receiving renewed emphasis in consequence of the growing attention given to the social sciences and the point of view prevalent in the investigations and discussions in these sciences. This point of view is, in brief, that the whole comes before the part, that society is an organism, that every social institution is to be tested by its fitness to perform that social service that may reasonably be expected of it in an actual society as now constituted, or in an ideal state conceived as an end to be realized. As already hinted, this view of the school is not altogether a modern development. The history of educational theory and practice shows clearly that the philosophical theorist and the practical reformer alike have been conscious of the essential function of the school in an industrial community, a governmental system, a kingdom of God on earth, or a social utopia. What is new in our more recent opinion is due to the fact that this conception is but one phase of a movement, all along the line, looking toward a unified view of the world and society, that will make individual effort rational and social aims intelligible. The school is to be understood in relation to society, and society is to be understood in relation to the rest of the world. The modern intellectual endeavor aims to understand force and life by the aid

of the different sciences, not that the world may be parceled and farmed out in perpetuity, but that universal order may be established and free and untrammeled communication be guaranteed. Specialization in the sciences is not an evidence of the despair of being able to understand the whole, but rather the recognized means of ultimately reaching such an understanding. The school as an institution, therefore, and education as a function, get new meaning when viewed in relation to this unifying effort of the modern mind.

It is not the purpose of this paper to indulge in further analysis of the general intellectual situation in which we find ourselves, but rather to indicate the point of view taken in what is later to be said; and to preface a brief résumé of some of the senses in which the school is currently discussed as a social institution. Without aiming at an exhaustive enumeration, let us note three possible meanings of the phrase. The school is a social institution in that it is an instrument used by society to accomplish a particular work; it is, again, a social institution in that it is the means for socializing future members of society; it is a social institution once more in that it is itself a society.

It is this third sense of the phrase that we wish to discuss in this paper. Without attempting an exhaustive definition, we may assume a mature society to be a number of human beings who are led by common or connected interests to live together in an intercourse formed in response to those interests. The community may be large or small, the intercourse close or loose, the interests simple and tangible or complex and varying. We may and do speak of the society of a village or of the United States. Custom and practical considerations lead us to select our society on the basis of common industrial interests. But we are often led to a different grouping on the basis of intellectual or artistic interests. Whatever the grouping, then, it is the common interest and activity that serve as the criterion of selection.

We are finding it increasingly difficult, however, in dealing with social groups, to get satisfactory results from the method of considering some one predominant and outstanding interest and neglecting the other interests of the individuals in the group.

This point may be well illustrated by examples taken from the industrial field. It is not such a long time since it was the accepted practice to group men in factories, and in so doing to have regard only for the gain-getting interest of the employers. Gradually it is coming to be recognized that it is the whole man who goes into the factory in the morning and out in the evening; that merely to serve the selfish purpose of the employer it is necessary to provide for the whole man, physical, intellectual, moral, aesthetic, and social. This is the meaning of the hospital, the gymnasium, the reading-room and evening classes, the playground and clubrooms in connection with many of our model factories. All this, be it noted, is done for mature men and women who, according to the old view, could well be left to provide these things for themselves. The factory has come to be regarded as a social institution. The school should be regarded in the same way. It is the whole pupil who goes to school. It is a common saying that education is not a preparation for life; it is life. This can be made true only on condition that the school cares for all the interests which govern the child's life while he is under the influence of the school.

If we were to accept this and the two preceding views of the school as essentially correct, and were to proceed to organize such an institution *de novo,* we might, I think, proceed in some such way as this. We should preface our undertaking by laying down some fundamental principles to govern our procedure. We should first insist that we should regard the life of the child as a whole, recognizing the justice of the current educational doctrine that in all his activity the child is one. Furthermore, we should insist that the child's world is not the world of the adult and that any programme which overlooks this fact is doomed to but partial success. After laying down these principles, we might turn to the consideration of the child, and ask ourselves what are the instincts, impulses, and desires which furnish the motive-power of the child's life. Having made a careful study of the child from this standpoint we should then turn to the provision made by society for guiding and directing these impulses. Putting these two lists side by side, we should be careful to pro-

vide that the whole child should receive adequate direction and control, to the end that he might grow up and become a useful and happy member of society. Sparing ourselves this theoretical procedure, in a paper which has a practical aim, let us select for our consideration certain defects in our present educational practice which such a comparison would reveal.

There are three social institutions which have, in the main, the supervision of the child's education, the family, the church, and the school. It will be agreed at once, I think, that there is no well-recognized distribution of function between these three institutions. The family controls the entire life of the child until he is of school age. Then he is divided between the family, the church, and the school. This traditional division might theoretically be satisfactory. The question is: Does it actually work well in practice? Is it a fact that the average child gets a satisfactory training through these three agencies? If he does not, who is to receive the blame, or, better, who is to distribute it? If it were true that each institution had a certain definite responsibility, failure might easily be laid at the right door. If, however, such failure is due, as it seems to me it is, to the neglect to make any such definite division of responsibility, what recourse are we then to have? It is the purpose of this paper to raise this question and to suggest at least a partial answer.

Let us consider some well-known facts bearing on this question. The family was the first school and the first church. However simple the training given, this primitive condition did have the advantage of caring for the whole child. With the growth of society and increase of its demands, the church and the school, in whatever form, undertook to supplement and extend the work of the family. So long as the church and the school, as well as the family, were thought to exist for the state, this division of responsibility and labor seemed to work satisfactorily. The same may be said of the period when the family and the state were thought to exist for the church. Unity of effort was enforced by the one controlling power. But, with the separation of church and state and the growth of individualism, all this has been changed. The church does what it can, the family what it can, the school

what it can, and is the result satisfactory? We are constantly hearing complaints of the failure of our institutions to give adequate preparation for life, not on the intellectual side only, but on the moral and social side. In the press, cases of youthful criminals are cited as proofs of the failure of our system. The same cases are used by those who would account for it all by our exclusion of religious training, or the Bible, from the schools, or again by those who would prove that our great public schools are godless institutions. There are other symptoms that point in the same direction. Consider the efforts that are being made in other directions to prevent, or repair these failures. In the great cities our park boards are providing the means for social training, or life, if you please, with a liberality and a wisdom that are truly astonishing. Is it not an anomaly that the public which seems to restrict the schools to a narrowly intellectual work so readily provides the means for doing what it has not permitted the school to do? Other efforts of a similar nature are being made by organizations and individuals. The Young Men's Christian Association, while professedly and sincerely religious in its ultimate aim, is providing purely social opportunities to the youth who can find them nowhere else. The social settlements are doing a similar work for a purely social purpose. I should not wish to be regarded as criticizing the work of these institutions and individuals. I am using them merely as evidences that society is recognizing the inadequacy of existing institutions for the work they are supposed to do.

I recognize, of course, that it may be said that this all has nothing to do with the schools; that they are created to do a certain work, and that society prefers to supplement that work by such voluntary effort because this is to do better by the schools and better by the children. Nevertheless, I venture to return to the point raised a moment ago and to repeat that it is the whole child that goes to school. From early morning until late afternoon the life of the schoolboy is under the control of the school. Most of his waking hours, therefore, are spent under its influence. Add to this the fact that he now leaves it when he is on the threshold of manhood, and we get an idea of how large a pro-

portion of his life is spent under its care. The question narrows to this, then: Can the school shirk the responsibility for the social education of the pupil? I make bold to say that it cannot.

Let me briefly expound the point of view toward which this whole paper has been converging. The school gathers together a number of pupils for intellectual purposes, if you please. These pupils spend a large portion of their young lives in the school, or under its influence. The same young people are born into the world with social instincts which are to weld them to the society of the future. In their intercourse with their fellows, these interests are awakened and seek normal expression. I submit, therefore, that it is not only the duty of the school to guide and control the impulses which it stimulates, but that it is a golden opportunity to give the pupil just such training as society demands. What then do I mean by social training? I answer, training in intercourse with one's fellows, whether teacher, or pupil, in the classroom or out, so as to contribute to the furtherance of the task in hand, be it work, or play, in accordance with worthy standards of what is good and beautiful and true. A large programme for the school, you say. Yes, but if society asks it of the pupil, why may it not ask help of the school? But it is not alone for the sake of society that I ask it. It is the right of the child.

What I propose, then, is a programme of enlargement of the functions of the school to include the general social training of the child, so far as the life of the child in the school affords opportunity. I have not the time, nor you the patience, to consider what the details of such a programme would be. I am satisfied to formulate the general point of view, and shall briefly consider some of the more general features of what seems to me a practical way of going about the work.

First, then, as to the method of procedure. This, I may say at once, should be that of experiment. It would be foolhardy, were we endowed with supreme wisdom, to launch an ambitious programme of undertakings on a community whose habits and ideals are already pretty well fixed. Inasmuch as we are not so endowed, we can begin humbly with slight innovations and win our way, step by step. The modern scientific world has accepted

as the final method of investigation, that of experiment. Why should we not adopt the same method in our attempts to solve social problems? The fact is such methods are employed in almost all walks of life, in business, in politics. Booker T. Washington is conducting a great experiment in social education. Jane Addams has been at the head of a great social laboratory for years. Can it be that the institution which should be the very embodiment of this idea, may not employ it, save in mere intellectual lines? Much as I believe that Principal Armstrong is on the wrong track in separating the boys and the girls in the Englewood High School, I consider it a great thing that the Chicago Board of Education voted to allow him to *try* the experiment.

Now there are three things necessary for the conduct of an experiment that is to be successful and instructive: a well-formed plan, a competent experimenter, and a careful test of results. If we are to undertake the work of experimenting on social lines in our schools, we shall have to look well to these three factors. As to the first little need be said. Any plan will need to take into account the conditions prevailing in the community which the school serves. An experiment in a rural school would probably differ widely from one in a great city school. The same thing would hold good as between the different schools of a single city. It is just because we are trying to deal with a definite set of conditions in each separate case that we cannot lay down hard and fast rules for all. We wish merely to insist that success will depend largely on careful planning with reference to particular conditions. The second factor in the experiment is a competent experimenter. I hardly need to insist that by an experiment I do not mean a happy-go-lucky attempt at innovation, just to see what will happen. I mean something as sincere as ever a chemist or physicist undertook in his laboratory. Hence the need of a trained experimenter, who shall know just what is going on and will be able to estimate results. I cannot attempt to say whether the average school is at present blessed with such a teacher or such teachers. I should like, however, to point out that, if the school undertakes to enlarge its work in this direction, there will be need of changes in the customary training given to teachers.

Such change will consist, not so much in the enlargement of the course of study on the intellectual side, as in the added emphasis on the real nature and scope of the teacher's work. There will be a more extended training in sociology and social psychology than is now usual, and such theoretical training will have to be supplemented by actual practice in some model school. Such training will not come as an additional and extraneous requirement, but as giving organic unity to the teacher's work in and out of the classroom. The testing of the results in such an experiment would naturally follow. Failures would lead to revision of plans and adoption of better means. This, in brief, is the method of experiment. At bottom, there is nothing new in the suggestion that it be extended to this kind of work. Every live teacher, every good school, employs it to a degree. What we need is the recognition of the fact that just this is the business of the school. We are to experiment, not on, but with the children. To do this, not only in the laboratory, but throughout the school, is at once to unify the whole work of the school, and to induct the pupil into the educational process which is to order his life.

It might suffice to close with this exposition of the thesis of this paper. But, because I have a practical end in view, I shall ask you to bear with me while I discuss briefly some of the difficulties in the way of carrying out such a plan, as well as some of the helps that can be relied on and some of the problems that may be attacked from this point of view. The first obstacle that will be met is the condition of the laws governing school children. With apologies to those of you possessing a legal training, I may say that our legislation has been made largely with reference to adults. The law is for citizens. Children are either so young that they are under the control of their parents and are ignored, or they are old enough to be treated as adults. That there is a number of years when they cannot be justly treated in either of these ways is overlooked. To be sure, we are now beginning to change all this. Our laws as to the age of consent, as to child labor, and especially the creation of juvenile courts are indications of a growing recognition that the law must take cognizance of the fact that there is a period in a child's life when he cannot be

regarded merely as a member of a family, nor yet as a mature and responsible person. This period corresponds roughly with the years of school life. It would seem possible, at least, that the law would come to recognize the right of the school to a limited control over the child during this period. It cannot be said here just what that control should be. But it would seem fair to presume as its principle, that the institution, to which the law compels a child to go for education, would eventually be granted sufficient control to make that education as full and complete for all who are sent there as our wisdom would dictate. It would seem that the state could and ought to do for the child before he becomes a criminal what the state is forced to do in order to reclaim him after he has become a criminal. Let the schools attempt experiments in the broader way suggested, and I believe authority would eventually be given them sufficient for the purpose. Recent decisions of the state courts as to the authority of school boards to deal with the fraternity question point in this direction.

Popular prejudice would many times stand in the way. It is often said that the American people are more interested in their schools than in any other one feature of their social life. This is undoubtedly true. But this body of school teachers will agree that this same American people have pretty definite ideas as to what a school should attempt to do, and as to the extent to which the teacher's authority reaches. Again, I say, nothing but a wise system of carefully conducted experiments will serve to overcome this prejudice. Results will speak for themselves, and is it not results that we are supposed to set above everything else?

Financial considerations will also act as an obstacle in some quarters. To carry on such work as has been suggested may lead to increased expense. Our school buildings may have to undergo certain modifications from the accepted type. An extra teacher may have to be employed, and the teachers now employed may need to be relieved of a part of the routine classroom work that they may have time for new duties. Here, again, we need not wait until the money is at hand. A clear demonstration of a need made through a successful undertaking will be worth a deal of

theoretical argument in advance. The fact is, I believe, that up to date no improvement in our school organization or curriculum has had to wait long for the necessary financial support.

The fear of paternalism in the school will be an obstacle. American civilization is founded on individualism. As a people, we are suspicious of the encroachment of the many on the rights of the one, whether that be in the form of paternalism or socialism. It is but natural that the schools should reflect this attitude. We are right in demanding that the schools should foster and develop individualism intellectual and moral. Nothing that has been said should be construed to be out of harmony with this ideal. Theoretically, at least, we can conceive of such an organization of the school life as would promote rather than repress the development of the highest form of individual life.

There are many helps at hand that may be utilized in carrying out our programme. I may take the time to mention one which under the present circumstances seems to be the most promising, namely, the parents' association. There is a wide-spread movement looking toward the organization of such associations in connection with every school. While it is too early to venture a statement of all that may be accomplished through this instrumentality, enough has already been done to warrant our belief in its efficacy. First of all the parents' association provides a convenient way of informing the school community of what the school is trying to do. The mere establishment of a clear understanding between the school and the community is in itself a great gain. It prevents the conception that the school, somehow or other, when once it is launched, may go on living an independent existence in the community that created and continues to support it. But more important is the rôle which such an association may be made to play in the introduction of new methods into the school. This is true whether the new ideas come from the school authorities or the single lay member. The school, like all institutions, is and should be marked by a wise conservatism in its actions. The parents' association provides a way of developing a powerful public opinion based on submission of evidence and plain discussion. With such public opinion to support them, the

school authorities may easily do what might otherwise be regarded as venturesome caprice. In the case of the public schools, in particular, where, as I have suggested, the authority of the teacher is either limited, or at least poorly defined, the opinion and support of the parents are invaluable guides. In one case of which I have intimate knowledge, a social experiment such as I have suggested has been made possible only through the support of such an association. The parents conducted the discussion of the policy for the period of a year and reached a conclusion which has since been carried out in practice. Moreover, the parents have willingly provided the funds with which to carry out the new policy. I may say that without this hearty co-operation of the parents the radical change from one social system to another would hardly have been inaugurated by the school authorities.

The parents can be of assistance, not merely through associated effort, but individually and in groups. Nothing proves more strikingly the limited intellectual ideals and aims of our schools than the practical exclusion of the parents from the life of the school. The church, with its broader aim, takes in the whole family. To a large degree, the school can do the same. I do not mean that a parent is not received with politeness into the principal's office. Rather is it true that the parent is not provided a place in the whole scheme. Were the schools to undertake a larger social work, most competent advisers and helpers would be found among the parents, helpers whose fitness would not be questioned and whose time would be at the disposal of the school for the mere asking.

With social organization must go social control. This control should be in the hands of the school authorities. I have a feeling that there is a tendency among the rising generation to regard the teacher with less than the old-time reverence. The modern teacher would be the first to protest against an artificial and constrained respect. What is needed and what the pupil should be made to realize, is that the school should have the authority to organize its own life. This authority should rest, to be sure, on nothing else than the actual existing relations between pupil and teacher. Those relations are simple and intelligible to the young-

est pupil. The duty and the right of maintaining these relations should belong to the teacher. Experiments in pupil government may be useful and instructive as practice in working the machinery of control, but back of the school should be found the authority of the teacher, and back of the teacher, the authority of the state. I do not believe in pupil government, nor in teacher government, but in school government.

Just where then is this social experiment to begin? What concrete thing is it to do that is not already being done? Perhaps the best general answer that can be made is that it is not so much a question of new activities as one of method and point of view in the conduct of the old. A brief treatment of certain common features of school life may serve as an answer to the question.

One striking defect of our schools is the failure to provide opportunity for mere social recreation—what we often call in a restricted sense "social life." It is safe to say that the instinct for this form of relaxation, or pleasure, if you please, is as natural and harmless as may well be. In the case of adults we recognize and provide for its expression. But the school is a place for work, so recreation must be left out. And where, pray, does the child get his recreation? On the way to and from school, in the fraternity house, anywhere that it may be found. So far as this is found under the control of the parent, well and good. But the fact is, the natural companionship of the pupils is with his schoolmates. The school society, in reality, is formed every morning when the pupils leave their homes, and is dissolved each evening as they reach their homes. The very act of bringing the young together for school purposes is a stimulus to their social instincts. The school ought to recognize this, and in connection with, and under the control of, the school there ought to be provided ample opportunity for purely social recreation. This policy would not contemplate at all the confusing of two different aims, the intellectual and the social, but the fusion of the two into a larger and more inclusive aim. I would advocate, to be explicit, the introduction into the programme of the school regular social occasions at stated and reasonably frequent intervals. These social meetings might take whatever form the circumstances would suggest.

They should be conducted under school control in such a way as to be a source of pleasure to the pupils and of real educational value. Ask yourselves about our ideals as to the all-around training of our own children. Do we not consider their social training an essential element in their future success, just as essential as their intellectual training? Can we not secure this training in large measure, if we but know how, in connection with their school life? We trust this whole side of education to the family. But I submit that the family does not and cannot control the social training that for good or ill is an inevitable accompaniment of the gathering together of so many young people into the school. Instead of deliberately neglecting these patent facts, why should we not utilize them as a golden opportunity for rounding out our educational scheme? We should thus unify and enrich the life of the children and bind them by the strongest ties to the school, and the indirect influence of such a course on the purely intellectual work of the school would be of the best. I know of an experiment of this kind in a school and I can bear testimony that in the opinion of teachers and pupils the experiment is an unqualified success.

That some such provision is needed in our schools is proved by the development of the high-school fraternities and sororities. The real meaning of these organizations is that the pupils have in this way attempted to provide just such social opportunities as we have suggested. It is idle to object to them that they are selfish and inadequate, when we remember that they are the creations of young and inexperienced children. It is equally idle to declaim against them unless we can provide some other system that will do for all what they do for some. I am strongly opposed to the fraternity system in our schools, but I hope that I am not bigoted on the question. My fundamental and single objection to them is the fact that they organize the school on a social basis that is narrow and selfish. I can conceive, however, a social organization of the school in which they might possibly be of but little significance. But as long as the life of the school is what it now is, they serve but to emphasize our neglect. I can appreciate the theoretical defense made in their behalf by a

culture-epoch theory of history, a recapitulatory biology or phylogenetic sociology. The simple fact is that they stand in the way of a social organization of the school that shall provide for all free expressions to social instinct, controlled development of social power, and a happy enjoyment of the society of one's fellows. The best way to deal with the school fraternity is to beat it at its own game.

Other vexed questions of school policy and management find a reasonable solution when viewed from this standpoint. School athletics are an instance in point. As at present conducted, they are for the selected few. All that is said for them as developing individual courage and prowess and as focusing at times the spirit of the school could as well be said were they but incidental to a larger athletic life in which all could participate. Provision for supervised and directed play for all pupils is the ideal, not toward which we should strive, but with which we should begin. We talk a great deal about the play-instinct and its place in intellectual and social development. But we promote a system of school athletics that throws our theories to the winds. Let some one of our schools set itself resolutely to experiment with this problem and give us all the benefit of the results. Could we ask for a better chance to provide social and moral training than might be found on a well-equipped playground under the control of rightly trained instructors? The park commissioners have recognized the opportunities, even if the board of education has not.

If the point of view we have developed is correct, what shall we say of coeducation in the schools? The problem is not an easy one, and it bids fair to become more difficult with the growing complexity of our life. Admitting, then, the difficulties to exist, what shall be our method of procedure? We have a system thoroughly established—at least in the schools of the Middle West. In the main, it has worked satisfactorily. Now that we are conscious of certain unfavorable tendencies and results, what should be our recourse? Should we hastily retrace our steps and abandon what we have already gained? Should we not rather ask ourselves if these shortcomings of the system are not due to the neglect to round out and complete it? I prefer to believe that

the latter is the way of wisdom. Mechanically to mass boys and girls together in a classroom or in the halls is not coeducation. The problem does not have its origin in the classroom. It is pushed in from outside. Not originating there, it cannot be solved there. It is a problem again of the organization of the whole school life. Why can we not realize what the problem is and adopt direct means to solve it instead of evading or retreating? Boys and girls should be taught to live and work together as they will be called upon to live and work in life. Are the elements of the problem so concealed, or the ways of solving it so hidden, that we must despair? The family does not despair, why should the school? Let us keep up our courage and try a little longer. The end is worth the pains. We can and must adopt a social system in our schools within which the much-talked-of difficulties will disappear because they are made impossible. With due allowance for the exception that proves the rule, I believe this can be accomplished. I can bear one further word of testimony. I am connected with a private high school of six hundred pupils, the majority of whom are boys. The parents pay a moderate-sized tuition fee, as such things go. You would expect them to be critical and free in the expression of their opinions. We have attempted to solve the problem through this broader social organization, whose aims I have been trying to expound. It is a fact that you may take for what it is worth that the officers of the school find the problem less and less difficult and the criticisms of parents on this score reduced to a negligible quantity. What we want is not less but more coeducation of the right sort.

It would be easy to illustrate by presenting other points at which experiments might begin. The lunch-room, the newspaper, the library, school and class excursions, before and after school, above all the classroom itself are available and suitable. You will be glad that I am going to leave these for your own consideration.

We have attempted to suggest a fuller definition of our conception of the social function of the school. We have urged that this broader and truer view must be adopted if we are to broaden our work. We have touched on facts that seem to show that the

school can and ought to undertake the task. As a practical way of beginning we have suggested the well-proved method of experiment. But whatever the verdict on the wisdom of the theory and the remedy, the facts will remain for our consideration, if not our confounding. A pupil can no more be a mere pupil than a machinist can be a mere machinist. If the school brings children together it should teach them to live together, serious and useful, but also glad and happy lives. The two aims are not conflicting but conspiring. It might seem easier to limit our aim and improve our product. But narrowing the aim will not narrow human nature, the whole of which, both for pupil and teacher, seeks full expression in the school life.

SHOULD HIGH-SCHOOL BOTANY AND ZOÖLOGY BE TAUGHT WITH REFERENCE TO COLLEGE ENTRANCE REQUIREMENTS?[1]

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In attempting to arrive at an equitable statement of this question, several interests must be considered.

First, to what extent do high schools exist in order to prepare boys and girls for college? Approximately 6 per cent. of all the pupils who enter the elementary schools finish the eighth-grade work, and less than 5 per cent. enter the high school. Obviously elementary-school work is not planned primarily to prepare pupils for the high school. Also the small number from the elementary schools who go to high school could be cited as one argument against arranging elementary work with any large degree of reference to the school work that is to follow.

Of the 5 per cent. (a little less) of the number of pupils who enter high school, one in ten goes to college. If the argument suggested above holds in this case, the high-school course should not be arranged primarily with reference to the work of the college.

It is said that there are about thirty-two million people in the United States who work with head or hand to support themselves and those who are dependent upon them. Of this number about two million earn their livelihood by work predominantly mental—teachers, lawyers, physicians, ministers, office men, and clerks of all classes. The two-million class receives almost the entire output of the college and by far the greater part of the product of the high school. It would seem that these two upper branches of the educational system are planned for the small minority of those who do the work of the whole people. It must

[1] A summary of a discussion given before the Conference in Botany and Zoölogy.

be recognized, however, that, although this group that is smaller in number is but one-fifteenth as large as the other group, it is in a large measure directive of the activities of the larger group, and because of this more attention relatively should be given to its education. This in no sense restricts education to the minority, since those of the majority who wish may join the minority.

However it is considered, it seems that college education and high-school education as well must be for the few. We must give the best education we can to those who will take it, but most of the thirty millions will not attend college or high school, or even the elementary schools, for any considerable length of time. The nature of human limitations and of the work that must be done are such as to render it inadvisable that all who are to join the world's workers should have a college or high-school education. Each person should have as good an education as, in the broadest sense, he can use in his life activities.

It is evident that each educational group contributes but a small part of its body to the group next above it. If its work is planned to meet the needs of the group above it, it is planned primarily for a small minority of its body, a number in no case exceeding 6 per cent. of its students.[1] The work of each school should be planned to meet the educational needs of the majority of its students. Whatever constitutes the best education for that majority should be accepted by the school next higher as qualification for entrance into its beginning classes. If the work of the higher school is so peculiar as to involve special preparation, that preparation should be given apart from the regular work of the majority, and should not involve any loss of time or opportunity to the majority.

This brings us directly to the question as to what right colleges may have to establish entrance requirements. It is fairly clear that merely to have a measure by which to gauge prospective college students the colleges have not a large measure of justification for setting entrance requirements. But even this small degree is justification sufficient, since the college must

[1] Report of the U. S. Commissioner of Education for 1904.

assure itself that its entrants have foundation sufficient for further work.

But the larger reason for establishing such requirements is in order that the high schools themselves may work according to the best standards. The colleges have a right to assist in formulating these standards in so far as the colleges have a knowledge of and interest in the needs of the high schools and conditions that prevail therein. Many college men have been students in high schools, students in colleges, teachers in elementary schools, in high schools, and now in college. They have a larger knowledge of the subjects taught, and, if their previous experiences have been wisely used, they should have a highly desirable perspective relative to the problem of what is good for the high-school pupil. To such men may come even better perspective than may belong to the high-school teacher.

Unfortunately, the college, instead of securing the services of men such as indicated above in establishing relations with high schools, too often appoint to this service younger men meager in experience, except in investigation in a special field of study. Such men, though they may frequently speak in empty terms of "the pedagogy of the subject," really think of the high school as preparatory to college work, sometimes as preparatory to college work in a special field. When one suggests to such a man that a problem in research, surpassing any with which he has yet dealt, is that of solving the relation of his subject to the highest general education of the majority of the high-school students, he is too often rewarded by receiving the smile of contempt that knowledge sometimes casts upon ignorance. High-school teachers greatly need the assistance of those college men who have insight into high-school problems, not in order to fit students for college primarily, but to give the best and most usable education to the largest number of students in the high school.

College entrance requirements in botany and zoölogy exhibit wide variations. An examination of the published statements of colleges and universities throughout the entire country shows a range from those who say, "Any course (half-year or year) will be satisfactory which brings the pupils directly into contact with

plants (or animals), either in the laboratory or in their natural surroundings out of doors," to at least one who says: "We neither require nor accept either botany or zoölogy for entrance into a freshman class. Physics and chemistry are the only natural sciences we take into account." There are very few colleges, however, that refuse to recognize botany and zoölogy in any form. Some make definite statement as to just what must be taught. Some go so far as to give detailed outlines for topics to be studied, and to furnish sets of questions used in entrance examinations of previous years. Such a system is indicative solely of "preparation for college," not high-school education. Such attempts to regulate the courses in these subjects deserve the widest condemnation. Even should they contain some good material, it is organized upon a false basis and should be avoided.

The colleges of the central states have, in the main, offered great freedom to high-school students who anticipate entering college. In this region almost any good course will be accepted when presented as an entrance requirement. There is considerable difference in the published statements of colleges of the central states, but little or no difference in actual practice in accepting students who present themselves. So far as I am able to judge, the colleges in the main are anxious to accept any course that seems best for the majority of the students in the high school. With this as the point of view of the college, the high school should examine carefully the published requirements of the colleges, not as college requirements, but as the college's expression of what it thinks best for students of high-school age. Final decision as to adoption of a course must be made by the high school, not by the college, and in the light of what is best for the majority who are not to go to college. What is best for this majority is good for the student who is to go to college, and will be accepted by the college.

We must not forget that much good has come to the high school through college requirements merely because they were requirements. The desire of the high school to be "accredited" has stimulated development that would have been much more slow in coming had this influence from without been absent. New

apparatus, new courses, new teachers, new buildings have come just because the college said: "You must do better before we can commission you." It is desirable to have the high school improve solely in order that it may be better; but if it will not do so for that reason, it is worth while to have it improve in order that people may see that it is better.

REPORT OF THE COMMITTEE APPOINTED BY THE ENGLISH CONFERENCE TO INQUIRE INTO THE TEACHING OF ENGLISH IN THE HIGH SCHOOLS OF THE MIDDLE WEST

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At the last meeting of this conference, held in November, 1904, this committee was appointed to investigate and report on the teaching of English in the high schools of the Middle West, with special reference to the College Entrance Requirements and the attitude of the high-school teachers toward those requirements. The committee was instructed to include outside or home reading also within the scope of its inquiry. In committee it was decided to take the conference schools as typical of the schools of the Middle West. The following questions were prepared and sent to each of the schools on the conference list:

I. What books are taken up in class during each year of the English course in your school?

II. If you have any objections (*a*) to the College Entrance Requirements, or (*b*) to the new list approved for 1909–11, either for general reading or for study and practice, please state them concisely.

III. If you are dissatisfied with the above-mentioned lists, will you make out a suggestive list to take their place?

IV. Is the student required to do any general reading outside of that mentioned in I (home reading)? How many books in each year?

V A. Are these books the same for all the pupils of one year?

V B. If so, give the titles of those required during the year 1904–5.

V C. If not, give the lists from which selections may be made.

V D. What is the principle governing the making-out of these lists?

V E. How do you determine the care with which these books have been read?

The replies to these questions were tabulated, first, in order to discover if there is any marked unanimity among the teachers as to the best books to be read both in and out of class, and, second, to present to the conference teachers, in condensed form,

the results of the experience of other teachers in the matter of general or home reading. The following report is in sum only a presentation of the tabulated results; but it is hoped by the committee that it may be productive of subjects for discussion, and may be as helpful to all the teachers in suggesting various methods which may be tried as it has been to those who analyzed the various answers.

Upon considering the replies to the first question, it was thought that it might interest the teachers to know the amount of reading done by different schools. Accordingly Table I was prepared. The body of the table shows the number of schools in which are read the number of books indicated in the first column. It appears that in the schools which replied, 67 in all, 4 books is the popular number for required first-year reading, with 3 books close to it; in the second year 4 books ranks highest, with 5 books a close second; in the third year, 4 and 6 are the two highest; while in the fourth year the numbers go up to 6 and 7. In some schools the readings which were listed were evidently illustrative selections to accompany a course in literature, and the number of titles given in one case was over forty. Such cases are tabulated as "indefinite."

TABLE I

NUMBER OF BOOKS STUDIED IN CLASS (BY YEARS)

NUMBER OF BOOKS	NUMBER OF SCHOOLS			
	First Year	Second Year	Third Year	Fourth Year
0	1			
2	5	3	5	1
3	15	6	9	3
4	19	17	12	7
5	4	14	8	8
6	10	10	10	12
7	5	9	4	11
8	5	5	4	6
9	..	1	3	2
10	..	1	6	3
11	..	..	2	1
12	..	..	..	2
14	..	..	..	1
17	..	..	..	3
Indefinite	1	..	..	3
No answer	2	1	4	4

The committee expected that in the upper years the influence of the College Entrance Requirements would show itself in a narrow range of books read. But, to their surprise, the exact reverse was found to be the case, as shown by the following figures. In the 67 schools that replied to the questions, 82 different books were listed as first-year reading, 92 as second-year reading, 102 as third-year reading, and 107 as fourth-year reading.

The popular books in the different years are shown in the following lists, the number following each book indicating the number of schools in which that book is used. In these lists no book appears which was not reported from the same year in at least five schools.

FIRST YEAR

The Vision of Sir Launfal (24)
The Sketch Book (23)
The Lady of the Lake (16)
Ivanhoe (16)
The Merchant of Venice (12)
The Last of the Mohicans (9)
Silas Marner (9)
Tales of the White Hills (9)
The Rhyme of the Ancient Mariner (8)
Snow-Bound (8)
Tales of a Wayside Inn (7)
Julius Caesar (7)
Twice Told Tales (7)
Poe—Selections (7)
The House of the Seven Gables (5)
Pope's Iliad (5)

SECOND YEAR

Julius Caesar (39)
Silas Marner (30)
The Merchant of Venice (29)
Ivanhoe (20)
The Rhyme of the Ancient Mariner (16)
The Lady of the Lake (15)
The Sir Roger de Coverley Papers (14)
Idylls of the King (12)
The Vision of Sir Launfal (11)
Macbeth (9)
Irving's Life of Goldsmith (8)
Sohrab and Rustum (7)
As You Like It (7)
Marmion (6)
The Vicar of Wakefield (6)
Poe—Selections (5)
The Deserted Village (5)

THIRD YEAR

Macbeth (28)
Burke's Conciliation Speech (16)
Milton's Minor Poems (16)
Idylls of the King (16)
The Rhyme of the Ancient Mariner (15)
The Sir Roger de Coverley Papers (14)

Chaucer's Prologue (13)
Macaulay's Addison (13)
Silas Marner (12)
The Vision of Sir Launfal (12)
Macaulay's Johnson (11)
Carlyle's Burns (11)
Julius Caesar (10)
Burns' Poems (7)
The Princess (7)
Macaulay's Milton (6)
Irving's Life of Goldsmith (5)
Ivanhoe (5)
Wordsworth's Poems (5)

FOURTH YEAR

Milton's Minor Poems (38)
Burke's Conciliation Speech (34)
Macaulay's Milton (25)
Macaulay's Addison (25)
Macbeth (23)
Hamlet (18)
Chaucer's Prologue (15)
The Princess (12)
Macaulay's Johnson (10)
Carlyle's Burns (10)
The Sir Roger de Coverley Papers (10)
Paradise Lost, I and II (8)
Idylls of the King (8)
The Rhyme of the Ancient Mariner (7)
Silas Marner (7)
King Lear (5)
Julius Caesar (5)
Browning, Robt.—Selections (5)
Burns' Poems (5)
Wordsworth's Poems (5)

These lists, it will be seen, overlap in many cases, and to show this, and also to present clearly to the conference the year in which a particular book is placed in most schools, Table II was prepared. In this table the numbers refer to schools; e. g., *Julius Caesar* is placed in the first year in 7 schools, in the second year in 39 schools, in the third year in 10 schools, and in the fourth year in 5 schools. Sixty-one schools out of 67 have it somewhere in their courses. In this table, as in the previous lists, no book appears which is not used in the same year in at least 5 schools, with the exception of the last one, which appeared worthy of special mention as indicating the progress of a new movement in English-teaching, in the direction of added interest for the pupils.

The question naturally arises: To what extent do these lists represent the real choice of the teachers, and to what extent are they influenced by the College Entrance Requirements? At the time these lists were made out, the requirements for 1906–8 affected all but the pupils at that time in first year. An asterisk

TABLE II

SHOWING BY YEARS THE NUMBER OF SCHOOLS IN WHICH BOOKS ARE READ

(Total Number of Schools, 67)

TITLE OF BOOK	NUMBER OF SCHOOLS					TITLE OF BOOK	NUMBER OF SCHOOLS				
	1st Yr.	2d Yr.	3d Yr.	4th Yr.	T		1st Yr.	2d Yr.	3d Yr.	4th Yr.	T
*Julius Caesar†	7	39	10	5	61	*Irving's Goldsmith	2	8	5	1	16
*Macbeth†	1	9	28	23	61	Burns' Poems		3	7	5	15
*Silas Marner†	9	30	12	7	58	Poe—Selections †	7	5	2	1	15
*Milton's Minor Poems†		3	16	38	57	Vicar of Wakefield†	3	6	3	3	15
*Merchant of Venice†	12	29	10	3	54	Twice Told Tales	7	4	2		13
*Burke's Conciliation†		1	16	34	51	House of the Seven Gables †	5	2	4	1	12
*Vision of Sir Launfal†	24	11	12	1	48	Last of the Mohicans	9	2		1	12
*Ancient Mariner†	8	16	15	7	46	Wordsworth—Selections	1	1	5	5	12
*Ivanhoe†	16	20	5	1	42	Deserted Village†	3	5	1	2	11
*Macaulay's Addison		4	13	25	42	Sohrab and Rustum†	2	7	1	1	11
*Sir Roger de Coverley†	3	14	14	10	41	Paradise Lost, I–II			2	8	10
*Idylls of the King†	3	12	16	8	39	Snow-Bound	8	2			10
*Lady of the Lake†	16	15	3		34	Tales of the White Hills	9			1	10
Macaulay's Milton		1	6	25	32	Marmion	2	6			8
Chaucer's Prologue†		3	13	15	31	Pope's Homer's Iliad	5	2		1	8
Sketch Book†	23	3	2	1	29	Tales of a Wayside Inn	7				7
Carlyle's Burns†		1	11	10	22	Browning—Selections †.			1	5	6
Hamlet		1	3	18	22	Tale of Two Cities †	2	3		1	6
*Macaulay's Johnson†		1	11	10	22	King Lear				5	5
Princess		3	7	12	22	Treasure Island	1	2			3
As You Like It†	2	7	4	3	16						

* College Entrance Requirements, 1906–8.

† College Entrance Requirements, 1909–11.

marks those books which are on the list of requirements, either for study and practice or for reading, for the years 1906–8, and a dagger after the title indicates those books which are on the list of requirements for 1909–11. The asterisk, therefore, should be noted in connection with the second, third, and fourth years, as shown in the table, and the dagger in connection with the first year. It would appear from this table that the College Entrance Requirements have, to say the least, a strong influence on the choice of books read, though what the courses would have been, had the teachers been free to make their selections, the committee had, of course, no means of learning. Some light is thrown upon this point by the answers to Question II. Before leaving this question it is, perhaps, worth noting that no one of the requirements is to be found in all the schools; that Macaulay's *Johnson*, though required for study and practice for 1906–8, is found in only one-third of the schools; and that Macaulay's *Milton*, though dropped from the requirements, still retains its place in nearly half the schools.

The answers to Question II show that the teachers generally do not approve of the present college requirements. Of the 67 replies, 40 contained some objection, 11 expressed satisfaction, and 16 did not answer that question. Most of the objections were to particular books, as shown by the following list. The numbers show how many objected.

Books too difficult, or not suited to the present-day needs of high-school pupils: Burke's *Conciliation* (13); Macaulay's *Addison* (9); Macaulay's *Milton* (6); *Comus* (5); Irving's *Goldsmith* (4); *Vicar of Wakefield* (3); Macaulay's *Johnson* (2); *Lycidas* (2); *Sir Roger de Coverley* (2); Carlyle's *Burns* (2); *The Princess* (1); Milton's *Poetry* (1); *Launcelot and Elaine* (1).

Other objections were as follows: Lists not sufficiently broad (8); no continuity (5); not adapted to any scheme of rhetoric (1); prose overbalances poetry (2); English literature overbalances American (1); not enough modern literature (1); nothing from the literature of science (1); selections too heavy (3); "They seem to deaden any love for literature a pupil may have," is the way one teacher expressed it; two of Macaulay's essays unprofitable (6); should be permitted to use the lists for 1909–11 now (1); entrance should be by diploma (1).

That the list for 1909–11 is considered a great improvement is shown by the fact that of the 67 schools, only 11 objected, 28 expressed themselves as satisfied, and 28 said nothing. This list also received commendations from a number of schools. Again the objections are largely to particular books. Besides the books already mentioned, Emerson, Webster, and *The House of the Seven Gables* are mentioned once each as being too difficult or unsuitable. *The Ancient Mariner, Silas Marner, Ivanhoe,* and *The House of the Seven Gables* are listed once each as worthy of being in the critical study group. *Sir Roger de Coverley* is objected to as not being Addison's best work. To quote from one answer: "Macaulay's *Milton* should be retained. His *Addison* and *Johnson* are arranged on a chronological basis, and do not offer the same opportunities for the study of the organization of material

as his Milton. This presupposes that the essays are studied as models of exposition."

Other criticisms of a more general nature are: Group VI too good to have all but two omitted (1); selections of the same group of unequal value; e. g., Chaucer's *Prologue* and *The Deserted Village* (2); study list not sufficiently broad (1); essay and oration given undue prominence (1). One answer sums the matter up as follows: "The principle is wrong. Study list is too short. Attempt to prescribe for the schools within such narrow limits is impertinent."

The commendations are as follows: More latitude (8); American authors on list (2); more good fiction (1); time in fourth year for contemporary writers (1); but one essay of Macaulay (1).

The following summing-up of the matter, from the answer of the Milwaukee Downer College, seems worthy of being quoted in full:

> The new list has the advantage of giving a wider range to choose from, and in the hands of a wise teacher, who has in mind the unity of literature and knows how to correlate subjects and where to place emphasis, regardless of her own personal likes and dislikes, such an opportunity for choice should bring desirable results. If the subjects could be distributed according to years of the course, to fit into a definite, uniform standard of teaching literature, the list would not tend to produce scattering, futile results, as is so often the case. More depends upon the general aim of the course, the large view of the whole four years' training, than upon the mere insistence upon the reading of this, that, or the other masterpiece. The subjects are all taught too much as a mere medium for giving information about subject-matter or for vapid moralizing, and too little for their intrinsic merit as works of art, and for the perfect models they furnish for students' composition.

Summing up the objections and commendations, it seems that a broadening of the College Entrance Requirements is what is needed to meet the various conditions in different schools, and the different personalities of the teachers. One teacher finds that *The House of the Seven Gables* does not appeal to her pupils; another wants it put on the list for critical study. From one school comes the complaint that the majority of the pupils have

never read a book outside of school, while other schools have pupils capable of studying Burke, Macaulay, and Carlyle in the second year. Surely it appears ill-advised, if not "impertinent," to prescribe the same courses for these various schools.

From the nature of the objections already mentioned, it follows that most of the suggestions given in the answers to Question III are for individual substitutions. It seemed to the committee hardly worth while to set them down in this report, inasmuch as no two are alike, and not one of them outlines a complete course. They are on file with Mr. Linn of the English department of the University, in case this conference decides to follow the matter up and work out a suggestive course of study. Some of the more general suggestions are: The study of American writers in such order as to illustrate rhetoric study in the first year, and the same for English writers in the second and third years; a chronological study of English literature with selections to illustrate. Make the course "as extensive as it can be made. It is not of so much concern what particular author is read, as the spirit that enters into the reading." "Texts are so little and the power of personality is so great that each school must work out its own problems." "College entrance examinations should, as a rule, not be on the books read, but on passages that the pupil never saw before," and should "show his power, not memory—what he can get from a selection, not what the teacher has crammed him with." "Teachers and pupils should have more liberty. There should be a very long list, or none at all. When pupils go to college, let them be judged by their ability to write and speak on what masterpieces they know—masterpieces they have had some part in selecting." Let there be "a more liberal interpretation of the term 'intensive study' than is indicated by the examination questions set by many colleges, in which technicalities of diction are called for that teachers themselves might have to look up. Secure uniformity not so much through choice of subject-matter as through a common aim" in teaching the subject. Examiners, in their questions, should "take into account the fact that these boys and girls cannot have the maturity of judgment that comes with years of study and research. The examinations

should call for appreciation and partial interpretation rather than masterly criticism."

From the foregoing it would appear that a broad list, together with a broad view in making out the examination questions, would meet the objections of practically all the teachers.

We have so far dwelt chiefly upon the objections to the requirements. To be fair, we must bear in mind the fact that 11 schools are satisfied with the requirements as they now stand, and 28 are satisfied with the requirements for 1909–11. In one case, however, this satisfaction was expressed as follows: "They are as good as any lists could be;" which may be variously interpreted. It is a pity that for the purpose of a complete presentation of the subject those who favor the requirements did not give their reasons; but the fault lies with the committee, as the wording of the questions would not call for such a statement. It is hoped that this may be remedied in the discussion and that both sides may have a full and fair hearing.

A different note is sounded in the following:

> This questionaire, to my mind, touches only the hem of the subject of College Entrance Requirements in English. The reading is not the important part of the subject. Composition is the garment. What colleges are asking for, as far as I can find out, is not knowledge of books, but the ability to write clear, correct English. Of course, reading aids composition in many [persons], but not to any great extent in students preparing for college.
>
> The colleges are right in asking for clear, correct expression, for it is handmaid to all other subjects. If a student does not enter college, expression, both written and oral, is still the important branch for him to master.
>
> In my experience I have noticed that, if the taste for writing is cultivated, the student desires to read. Of course, students differ. The master has to work with the individual. This is the whole Law and the Prophets.

This concludes that part of the questionaire which deals with the College Entrance Requirements. The committee has endeavored to place before you the gist of the replies in the spirit in which they seemed to be written, and to avoid as far as possible all personal bias. If such bias appears in the report, the committee pleads that it was forced in by the evidence, not carried in consciously. Leaving this matter, then, in the hands of the conference, we will pass to the consideration of the second general subject treated of, the subject of outside or home reading.

From the answers to Question IV it appears to be the opinion of nearly all teachers that outside reading should be controlled to some extent by the English teachers. Of the 67 schools, 55 require it, 3 advise it, 6 do not require it, and 3 did not answer. Table III shows the number of books required or advised in each year. The figures in the body of the table again refer to schools. The numbers for the different years do not foot up the same because in some schools the course is but three years long, so that no answer was given for one year, and because in some cases the answer was incomplete.

TABLE III

NUMBER OF BOOKS READ OUTSIDE OF CLASS (BY YEARS)

NUMBER OF BOOKS	NUMBER OF SCHOOLS			
	First Year	Second Year	Third Year	Fourth Year
0	10	2	1	2
1	2	..	2	1
2	6	8	7	5
3	4	13	9	2
4	13	9	7	8
5	7	8	10	10
6	3	3	2	4
7	1	1	..	..
8	2	3	7	5
10	4	3	2	3
12	..	..	4	3
13	..	1	..	..
14	1	1	..	1
20	1	1	1	1
Indefinite	4	4	5	8

The table shows such a variety of usage that it is perhaps unwise to attempt to generalize from it. However, it seems justifiable to conclude that five books or fewer is the general practice.

Question V asks: Are these books the same for all the pupils of one year? The answers are: yes, 11; no, 39; part optional and part required, 7; no answer, 1. Of those schools that require all the pupils to read the same books, four except the fourth year; and of those that allow the pupil to select (within limits) his readings 1 excepts the third year and 1 the fourth year.

Upon taking up the lists of books for outside reading, the

committee found itself somewhat at a loss just what to do. The lists themselves are so full of suggestions that it is very much to be regretted that they cannot be given here. An attempt was made, however, to extract from them some general conclusions which it is hoped will be of interest.

Considering first the lists sent in from schools where all the pupils of one year are required to read the same books, it was hoped to find some common ground, some 3 or 4 or 5 books which were considered by a fair number of teachers as essential. It was found that the most popular book was *Ivanhoe,* required in 10 schools of the 18 that fall within this group. But this book is one of the College Entrance Requirements, which seemed to rob it largely of its value as an index of the teacher's choice. Search was then made for the most popular book not on the list of requirements. This was found to be *The Last of the Mohicans,* used in 7 schools. After careful consideration, it was decided that any list in which the most popular book was the choice of only about one-third of the teachers would be more misleading than helpful. The plan of making such a list was therefore abandoned.

The attention of the compilers was then directed toward the nature of the lists as a whole, and the apparent aim of the teachers who made them out. This ground is partly covered by the replies to question VD, and those who looked over the papers congratulated themselves upon the close agreement between their analysis and the expressed aim of the teachers. It seemed to the committee that their analysis was a little more detailed in most instances, and therefore it is given here in Table IV. It should be borne in mind that this table refers only to those books which are required as outside reading from all the members of one year. Under the heading "Supplementary to Class Reading" are grouped the following classes: (*a*) other books by the same authors as those read in class; (*b*) biographies of authors studied in class; (*c*) books illustrative of the times of the authors studied in class; and (*d*) readings to accompany a study of the history of literature. Of course, some lists presented mixed aims, but the attempt was made to discover the predominant one.

TABLE IV

PURPOSE OF OUTSIDE READING

(All pupils of one year read the same books)

PURPOSE	NUMBER OF SCHOOLS			
	First Year	Second Yr.	Third Year	Fourth Year
Supplementary to class reading	4	3	4	4
Wide range—interest	9	8	9	6
College Entrance Requirements	1	8	4	8
American literature	1	1	..	1
English literature (chronologically)	..	..	3	..
Romantic poetry	..	..	..	1

Among the schools where all the pupils of one year are not required to read the same books, a wide divergence in aim and method obtains. Some teachers allow a choice from a comparatively short list, 20 or 30 books; others have lists of 200 or 300 books from which the pupils may select at will. In one school the school library of 2,000 volumes is the field in which the pupils may browse, and that may be supplemented at the option of the teachers. Any attempt to compile a list of books favored by the majority of teachers would, of course, in such circumstances be a failure. In fact, in many instances no list of books was submitted, the remark being made that the pupils were allowed to choose at will, subject to the approval of the teacher.

Two sharply contrasting points of view as to method were presented in the replies. In some schools the titles are arranged in groups, and the pupils are required to read one or two books of each group. Illustrative of this plan, one list for first-year reading calls for one book from each of the following classes: I, Cooper; II, American poets; III, short stories; IV, Hawthorne; V, narrative poems; VI, Scott (novels). By this means a well-rounded course of reading is aimed at.

As opposed to this method, the following statement is quoted from one reply:

> I know of no better way to kill interest in reading than the plan of requiring the reading of certain books. What should be a pleasure becomes toil, in most cases. The better way, as it seems to me, is to stock a library with good books, and let the pupils choose for themselves. All day long they

have acquired knowledge from books under a rigid system of school government and instruction: why not give them entire freedom when they go to the library?

A large majority of the teachers take a middle ground, not requiring strict adherence to any predetermined outline, but not allowing the pupil absolute freedom. Upon reading the lists and the accompanying statements, the committee reached the conclusion that in the majority of cases the attempt is made by the teachers to ascertain the individual needs of the pupils, and by personal influence to guard against a narrow course of reading.

Another device to secure interest in the home reading is reported from one school. Lists of readings arranged in groups are prepared to accompany each course in English, and additional credit is given to any student who reads a certain number of books from each of the groups. The number required is one for some courses and two for others. The lists are worthy of notice as being, with one exception, the only ones reported which contained the Bible. The groups for most of the courses are: I, Bible; II, poetry; III, history, biography, miscellaneous; IV, fiction. The selections vary in difficulty with the various courses, and in the highest course is added a group made up of magazines and newspapers.

The principles underlying the preparation of the home-reading lists were reduced to the following: supplementary to class reading; correlation with history courses; individual needs of the pupils; first year, wide acquaintance with books; later, with particular authors; to guide those who wish an orderly course in reading; to encourage pupils to select from many kinds of literature; to raise the standard of reading by gradual steps. To quote one reply in full:

> The lists are the combined judgments of each group of teachers as to what the pupils like, coupled with some ideal as to what they ought to like. The object is solely to carry the pupils over from the trashy material they have been reading into good literature. No instruction is aimed at, simply the development of good taste in reading.

The means taken to learn how carefully the outside reading has been done are given as follows: discussions, with written

tests (20); discussions, with themes (11); reports, oral and written (8); written tests (7); book reviews (4); discussions in class (3); discussions outside of class (3); notebooks (3); star-chamber examinations (1).

This concludes the inquiry conducted by the committee, and it now submits this report to the conference for such action as the conference may see fit to take. In such a summary as this many matters of interest were necessarily omitted, but it is hoped that enough were retained to give the report a certain value in the eyes of the teachers. In conclusion, the members of the committee wish to express their sincere thanks to the chairman of the conference, Mr. Linn, for the assistance he gave them in indicating lines of inquiry in the analysis of the replies, and for his helpful criticisms of the report as it was being prepared; and also to Mr. Hosic, of the Chicago Normal School, for his careful reading of the report and the suggestions he made for its improvement.

GERMAN

WHY SHOULD THE TEACHER OF GERMAN HAVE A KNOWLEDGE OF PHONETICS?

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If we communicate a thought to our fellow-men and select the means of spoken language, the process which is accomplished can be divided into the following stages: (1) We conceive an idea; (2) we produce sounds by expressing our idea; (3) the sound-waves travel through the air; (4) the ear of another person receives the waves, and (5) the words are understood and the idea is grasped by the other person. Two of these five stages interest us here: the production of sounds by the speaker, and the sounds received by the listener. These two processes form the realm of phonetics, and the latter is therefore to be divided into two groups, namely, (1) the production of sounds—*Lautbildung;* and (2) the analysis of the sounds themselves—*Lautlehre.* These bear the relationship to each other of cause and effect, and cannot be studied separately.

To what extent do these two aims of phonetic studies, the *Lautbildung* and *Lautlehre,* interest the teacher of German? Here I have especially in mind those teachers whose native tongue is not German. Just as English and French are taught in Germany by Germans, English and German in France by Frenchmen, the time will probably come when German will be taught in this country almost exclusively by Americans. The teacher will, in the majority of cases, study the foreign tongue first in this country and, when possible, complete his linguistic training during a longer or shorter stay in Germany. He will learn the language by watching other people who have mastered it, and by practicing it under their supervision.

Whoever wishes to master the pronunciation of a foreign tongue will notice at once that he has to acquire the ability to

produce sounds which are not found in his native tongue. Nobody can deny that this task will be greatly lightened by an accurate knowledge of the conditions under which these sounds are produced. The most accurate knowledge of these facts can in a comparatively short time be acquired by the study of *Lautbildung*, which is the subject of the above-mentioned first part of phonetic science. Furthermore, if the student acquires a definite and accurate knowledge of the sounds themselves, which is the subject of the *Lautlehre* or second part of phonetics, he will be enabled to watch more closely his own utterances in the foreign tongue, and those of others. It is true that many persons have acquired another language without ever having heard of phonetics; but, on the other hand, it cannot be denied that a good working knowledge of *Lautbildung* and *Lautlehre* will enable a person to pronounce correctly, and to judge more accurately the pronunciation of others. A phonetic training will therefore help the teacher in achieving a knowledge of the foreign tongue and in teaching it to others. Furthermore, nobody will, in the course of his study, become acquainted with the entire vocabulary of the foreign tongue. The teacher will have to deal in his work frequently with words which he never has heard before, and only with the help of a good phonetic training will he be able to determine the pronunciation of a word which is new to him, by the description supplied to him by the theory of phonetics.

Aside from these merely practical advantages, other features present themselves from the study of phonetics, which are of at least an equal value. Every teacher of German, be his field of work either in the secondary school or in the college, should have a genuine interest in Germanic philology. He should know something about the historical grammar, and continually enlarge his knowledge of the laws and facts which philological research has brought to light. There is no better introduction to Germanic philology than a scientific study of the living language. The same forming factors were at work to build up and change the old dialects which rule the living tongue, and undoubtedly these factors can be more easily studied from the paradigms supplied by Modern High German than by Gothic. If the student

begins his philological training with Gothic or another far remote Germanic dialect, he has to learn all the new linguistic processes and facts, the new terminology and technical expressions, through the medium of a foreign language quite different from any with which he has as yet been familiar. It is apparent that he meets too many difficulties at once, and his task would be considerably simplified if his first acquaintance with philological methods were gained through a language with which he is already familiar. This would mean proceeding from the familiar to the unfamiliar, instead of going the reverse way by beginning with Gothic and *Urgermanisch* and coming down to Modern High German.

The value of phonetics for linguistic training was recognized a long time ago in France and Germany, and many years of experience in these countries have eliminated every doubt of the usefulness of phonetic studies.

An exhaustive bibliography on phonetics can be found on pages 37 and 38 of Bahlsen, *The Teaching of Modern Languages* (Ginn & Co.). The following titles should be added to Bahlsen's list: Karl Luick, *Deutsche Lautlehre* (Leipzig, 1904); Otto Bremer, *Deutsche Phonetik* (Leipzig, 1903); Wilhelm Viëtor, *German Pronunciation,* third edition (Leipzig, 1903). Also Paul Passy *Petite phonétique comparée des principales langues européennes* (Leipzig, 1906).

VALUE OF PHONETICS FROM THE STANDPOINT OF THE STUDENT

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The subject presupposes in the present consideration the student of language (German) as opposed to the pure phonetician. The foremost source of inspiration is to be found in the work of Professor Dr. Hermann Klinghardt, who in his *Artikulations- und Hörübungen* (Köthen, 1897) has succeeded in making phonetics of practical value. His message to the conference is one of most cordial greetings and good wishes. In it he says:

Will you always emphasize for the people of the old school this one thing? We phoneticians do not desire to teach the children a new science. We demand only that the teacher shall be thoroughly grounded in phonetics, in order to be able to draw therefrom practical aids, which in cases where pure imitation has not suffered can and will lead to the desired results.

A comparison of this statement with others of Professor Klinghardt's on the practical value of training in phonetics for the student justifies a distinction at this point between *der Lernende* and *der Student,* between the child of the classroom and the more mature person who is confining his efforts at the language to the pronunciation. The difference, however, seems to be one of degree and not of kind; and if the superficial knowledge which the child gets can secure him the results which Professor Klinghardt indicates, there would seem to be but little need of further argument for the cause of the real student.

The following is a brief summary of such a course as Professor Klinghardt offers to those of the latter class. First: A study of the construction and activities of the vocal organs; their coarser and more elemental articulations illustrated by such *nichtsprachliche Artikulationen* as coughing and laughing (which are, however, of immediate use in the development of *Knackgeräusch,* the slight explosion of the vocal chords preceding words and sometimes syllables beginning with a vowel, such as *Erinnerung, Anfang, ach, endlich, auf*). With this for a basis begins the work on language sounds proper. They are treated singly and in combination, first from the articulatory and then from the acoustic side; each also with respective relation (1) to the larynx, (2) to the palate, and (3) to the lower jaw with its appendages, the tongue and the lips. Vowels and consonants are distinguished and classified, and the nature and value of mutes are treated. The system works out as it advances a very complete set of muscular, vocal exercises for assistance in producing the desired articulations. Hand in hand with this must go word- and sentence-analysis and the mastery of phonetic script.

The whole system presupposes the all too well known fact that the average student does not acquire involuntarily—i. e., by imitation—an accentless pronunciation. We have but to look

about in cosmopolitan Chicago for instances of the foreigner who, with every chance for imitation afforded him for years, has still the mark of his native tongue upon his speech. For us as Americans this question of acquiring a perfect pronunciation in a foreign tongue is especially serious, because as a race we have little language talent. Observation would almost lead to a belief in the statement, often made and unfortunately not verifiable, that not one American in one hundred ever acquires a good German accent by imitation alone. Case after case could be cited of American students in Berlin who, after months and even years of residence and study under the most favorable conditions, not only were not giving foreign articulations, but were absolutely unconscious that they had not the slightest approach to certain characteristic sounds and inflections.

That we should go on doing things thus well or ill by chance is not in the spirit of the time. It is the day when science is helping us to do everything correctly by law, and it is very apropos that in this most colossal task of acquiring a correct pronunciation she should provide us with a special science and laboratory methods for it.

The two main reasons why we do not imitate accurately a correct pronunciation are: (1) that our ear is dull, and (2) that our muscles are unskilled. Habit has set its seal upon our senses and made slaves of them by lessening their acuteness. The auditory nerves on the one hand, accustomed to carrying certain messages, continue to do so, even though the stimulus has been an entirely new one, and the result is that we actually do not hear the difference between the old sound and the new. The muscles, on the other hand, execute certain movements because it is their habit so to do, even though the nerve current from the brain has given them a different order.

The system of practical phonetics is the result of an effort to meet and offset these two weaknesses. To impress them, I shall give a few examples, which will serve also as general illustrations of the phonetic idea. As beginners most of us have ears closed to the difference between the German and the English *l;* and even the grosser muscles are often so stiff and uncontrollable that as

simple a thing as the *u* or the *ü* is impossible, even though a very easy exercise would bring the result in a few minutes. I was several months in Germany before I could distinguish between *ā* long and *ă* short, even though I had been told that a difference existed. But by being taught phonetically how to make each of the sounds, I finally learned to hear them, and could of course then apply them without difficulty. On the other hand, the unpleasing American substitute for the German *r* is due less often to a dull ear than to untrained speech organs. A comparatively easy difference to hear, it is still one of the most difficult to execute. In the building of the palatal *r* we are told to direct the tip of the tongue toward the dividing line between gum and hard palate, further to the front than for English *r*. But we are probably unable to do so, and a mirror will often show the tongue sunken in the lower jaw when we imagine it is being lifted as high as possible. One of the chief aids in effecting this articulation is the supposedly easy transition from the initial consonant of the word "journal" to *r*. The rule is to withdraw the tongue a trifle downward and backward, until the passage becomes wide enough for the air to cease rubbing and leave a half-vowel exit. Usually I could not tell which way my tongue was moving. Here then it was not the ear, but the muscles, which needed training, and the exercises given and practiced amounted to pure vocal gymnastics and brought finally the necessary control.

In addition to these two points, (1) of teaching the ear to hear and (2) of training the muscles to execute, a *third* also demands emphasis, that the would-be phonetic student must also be able to understand the mechanics of any articulation; and a *fourth*, that he must be able to account for the relation between the given articulation and the corresponding sound—i. e., that he must know, not only the position of the organs for any given sound and what happens, but also why the result is what it is. For instance, it is not enough that the beginner be satisfied with reading in a textbook how the tongue and lower jaw are placed for German *j* and English *y*. He must know also that *y* is a half-vowel, which means that it has an almost vowel-large opening for the passage of the air column, while *j* is a *Reibelaut*, the most consonantal of all

consonants except the stops. The significance of this is that the air rubs so hard, as it forces its passage for *j*, as to result in the peculiar sound of *ja, jährlich, jetzt*, as opposed to *yes* and *your*. Or let us take the word *klein*. We may have learned by the law of assimilation that the breath sound *k* would demand a changing of *l* from a voiced to a breath sound; but what does that mean as to mechanics, and what will be the corresponding result? A breath sound is made when the throat is sufficiently open, so that the air is allowed free passage; a voiced sound, when the vocal cords alone are allowed to vibrate *l*, is usually the result of these *regular* vibrations passing a certain resonance chamber. For the desired tone here then the upper vocal organs are held in the same position, and only the larynx is opened. The result is *klhein* instead of *klein*—the one German, the other English.

Compare in *bed* and *Bett* the initial consonants. Why is one so strongly *b* and the other so nearly *p*? In our English sound there is the so-called *Blählaut* preceding, a cramping of air from below against the closed larynx; while the German sound is much quieter and finds a passage almost as free as a *p*, but is not wholly voiceless. Once more: The average student says *Tä* instead of *Tee*. Why? *T* is an explosion, and the force of the air striking the tip of the tongue sends it down quite well into the mouth; then it must be raised again to the *e* position, which requires it to leave a fairly narrow passage next the roof of the mouth. Now, if we remember that we are all the while dealing with one column of air, issuing from the larynx, and that individual sounds are but its modifications, due to changes in size and shape of the resonance chambers above, it will not be hard to understand that, if the air stream continue after the explosion (and especially if *Ton* set in at once), we are going to have all the possible variations of sound between this left-over *t* position and the desired *ē*. The result is *taĕē*. Phonetics will teach us the value, not only of individual sounds, but also of sound groups and the necessity of anticipating the one in the other—here of preparing for the *e* by controlling the amount of explosion, so that the result may be *Tee*, with one pure vowel sound, free from any trace of American slurring.

What has been emphasized so far has had to do with the acquisition of a correct pronunciation. Let us now look to the retention of it when acquired. Once away from its native soil any language suffers corruption of one sort or another, and here in America even native-born Germans rarely keep a perfectly untainted speech. Phonetics should and does meet this need, which is palpably due to the failure of the untrained ear to hold the sound. It is a most valuable check even for the student, who at first may have learned by imitation, nor can it be utterly despised even by the *Eingeborenen*. It establishes definitely for the individual certain normal articulations, to which he may afterward refer, and which will mechanically bring again the desired acoustic effect.

Such, in general, are the merits of phonetics for the student. To the frequent objection that the system is opposed to every pedagogic principle, that it begins at the wrong end of things, there is this answer: It does not reverse, but merely furthers the process. We speak of the natural method as that by which a mother-tongue is learned. And what does the baby do? He listens and listens until he distinguishes sounds (we call it understanding), and tries and tries until he can execute them (we call it talking); and it usually takes five or six years before he has an accentless speech (talks plainly). When we begin a language, we too are but children, but with this handicap, that we already have one set of vocal symbols which habit has fixed and which will make it infinitely harder to acquire new ones. Whatever then can assist in shortening the process of acquisition and securing the results will surely be welcome.

There are some persons who complain of the drudgery of the system. Let us hope they are then of the happy class who gain by imitation; for there is no middle ground. It were, however, perhaps fitting to quote to them a remark more than once made by Professor Klinghardt—that anyone who had worked in phonetics need never be bored. In the street car there was always some suggestion in the irregular speech of a fellow-passenger; at a lecture, even if the material itself were uninteresting, the speaker would afford in his articulations a constant object of study.

Without doubt the curious old people of the provincial town and country districts gain a double interest if one tries to analyze and account phonetically for their curious dialects.

A third possible disadvantage has been suggested herein: that the speech of one phonetically trained is restrained and conscious, sometimes labored. But it is one which has to do only with beginners. To speak grammatically they must also speak very carefully, but fluency comes with practice; and so here the difficulty is one which will adjust itself perfectly with time.

What Professor Klinghardt has made possible through his masterful *Artikulations- und Hörübungen*, Fräulein Hedwig Klatt, of Berlin, is carrying out every year with the American students who go to her there. Her results are remarkable, and a comparison of her pupils with those of teachers, who cannot offer what she gives, affords very telling evidence of the value of scientific production of sound. Personal experience gained during a period of study with her, and careful observations made in that connection among a fair number of students, lead to the conviction that for the large majority of persons, who in an untrained state do not imitate readily and who need the initial help and the after check which it offers, phonetics is essential.

PHONETICS IN THE CLASSROOM

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The preceding speakers have made it clear that imitation, however important a part it may play in individual cases, does not inevitably bring about a good pronunciation. Nor can this end be reached by the mere pointing-out of specific errors of speech—a method apt to deteriorate into nagging. The more conscientious a teacher is in such correction, the more liable he is to tire himself and to irritate his pupils, while achieving but slight results. And why is this? Because only the analysis of the errors—and applied phonetics is nothing else than such analysis—not the more or less occasional correction,

leads to a permanently good pronunciation. In other words, one must deal with the cause rather than the effect. Phonetics reveals this cause, and thus becomes a prerequisite for scientific language instruction.

The following examples, chosen at random, will serve to illustrate the practical application of phonetics in the classroom.

Fundamental principle: In teaching a language, start from the sound and not from the spelling.

A. CONSONANTS

1. The spelling used in the foreign word is especially meaningless to the student if the sound expressed thereby does not exist in his own language.

Of the German spirants the *ich*-sound is frequently mispronounced. The manner in which it is formed shows us its pronunciation. It is produced between the vaulted front part of the tongue and the hard palate, at the same place in the mouth where the vowel *i* is articulated. The position of the tongue is almost identical in the production of the two sounds. Thus we get the following rule for the formation of *ch:* Speak or rather sing *ī,* then stop the vocalization. If the organs of speech remain unchanged, the *ich*-sound must result. A similar rule is found for the voiceless guttural spirant which is formed in the same place as is *u,* namely between the back of the tongue and the middle of the soft palate.

A common mistake is the pronunciation of *isch* for *ich.* In sounding *ich,* the point of the tongue is bent downward, but *isch* cannot be sounded unless the tongue is raised above the lower teeth. Hence the rule: Hold the tongue down with pencil or finger, and the mistake will be avoided.

In practicing the difficult voiced guttural spirant, start with such a word as *lăchen* and lengthen the *a* unnaturally until the following consonant becomes voiced, taking care not to drop into the uvular *r; lăchen* > *lāchen* > *lāgen* (not < *lāren!*).

2. The same written symbol often signifies different sounds in two languages.

We may illustrate this by the *Zitterlaute* (sounds produced

by vibration), which, however widely they may vary in their character, always are expressed in writing by the letter *r*. There exist:

a) Labial *r*, e. g., the *brrr!* of the German teamster.

b) Alveolar *r*, point-trill *r*, *Zungenspitzen=r* in several varieties.

c) Cerebral *r*, the American western *r*, an untrilled *r* formed with the end of the tongue curved upward.

d) Uvular *r*, *Zäpfchen-r*, guttural *r*, back *r*, Northumbrian burr, now the standard *r* in Germany and France.

e) Glottal *r*, *Kehlkopf-r*, *"Leutnants-r,"* an intermittent sound produced by a slow vibration of the vocal chords.

f) The imperfect *r* of baby talk, identical in nature with the *r* of the English fop, e. g., in *vewy wong* (="very wrong"). The back of the tongue is raised to the *u*-position.

g) Spirant *r*. If the uvula no longer vibrates, *ch* is substituted for *r*.

h) Vocalized *r* as used in New England and the southern states. Berlin *wea, hia* for *wer, hier*.

i) *R* assimilated to a following stop: *Ka'toffel* for *Kartoffel*.

In English *r* always trilled after dentals provides the student of German with a model for the German tongue *r*. If he wish to acquire the back *r* produced by a vibration of the uvula, let him begin by rendering the muscles of the uvula flexible through gargling water. A device for practice would be such alliterations as: "Roland der Riese am Rathaus zu Bremen," or, "Zu Breibach auf der Kellerei stehn drei und dreiszig Kröppe voll Reisbrei in einer Reih!"

3. The symbol using two letters for one sound is misleading.

Ng, the velar, is a single sound, *g* having been assimilated to the preceding *n* already in Middle High German. Compare English *comb=Kamm, lamb=Lamm*. *Lang* and *Bank* do not form a pure rhyme in German. How then does German *ng* differ in pronunciation from German *n*? The latter is the front nasal, the former is the back nasal for the formation of which the mouth cavity is shortened. Pronounce English *in* and *ring* and show the tongue receding.

4. On the other hand, the German dental affricate, consisting of two sounds, is expressed by one letter.

For the pronunciation of German *z* in such words as *zu, Zinn,* refer to their English cognates, thus showing that the initial sound of both German *z* and English *t* is naturally the same.

The letter-picture of the labio-dental affricate, it is true, shows two letters, but one of them is inaccurately chosen. German *pf* is the labio-dental explosive followed by *f*. Do not pronounce *p* and *f*, which is pedantic, nor substitute the spirant *f* as do the East Middle German dialects. To secure the correct pronunciation, hold up the upper lip with pencil while practicing.

5. A symbol stands sometimes for more than one sound in the same language.

The pronunciation of the German mediae, for instance, varies according to their position in the word. Difficult for the foreigner is the pronunciation in final position if preceded by a long consonant or *l* or *r*. The following pairs of words do not, strictly speaking, form pure rhymes: *Grāb, Satrāp; Pfad, Rāt; Balg, Kalk*. *P, t, k* being voiceless, there is naturally a hiatus between the voiced *a* and the following explosives. Such a pause does not occur when the following consonant is voiced; in *Grab, Pfad, Balg* the voiced vowel leads over into the consonant whose beginning becomes voiced and whose ending is voiceless (=*bp, dt, gk*).

6. Various symbols are used for the same sound.

See *König, freundlich,* etc.

B. VOWELS

The chief difference between the pronunciation of English and German vowels is of a twofold kind:[1] (1) The German uses his lips more actively; (2) the German does not only draw the tongue farther back, but also presses it farther forward. This

[1] A. Lange, "Artikulationsgymnastik im französischen Elementarunterricht," *Zeitschrift für neufranzösiche Sprache und Litteratur,* begründet von Dr. G. Körting und Dr. E. Koschwitz, Vol. VIII, pp. 147–66; Dr. H. Klinghardt, *Ein Jahr Erfahrungen nach der neuen Methode: Bericht über den Unterricht mit einer englischen Anfängerklasse* (Marburg, 1888), pp. 5 ff.

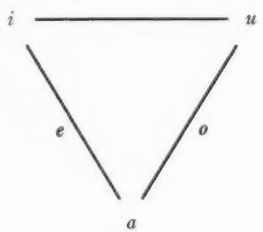
makes such preparatory drills as the following a necessity for the acquisition of German vowel sounds:

i-ü-i-ü
e-ö-e-ö } position of tongue stationary, position of lips changed.

u-ü-u-ü
o-ö-o-ö } position of lips stationary, position of tongue changed.

i-u-ɪ-ʊ
e-o-e-o } position of both lips and tongue changed.

When the pupils articulate *a-i-a-i,* they can feel with finger or pencil, or observe in a mirror, that the front part of the tongue presses forward and upward; the same will appear in articulating *a-e-a-e.* Articulating *e-i-e-i* proves that the forward motion of the tongue from the *a-* to the *i*-position is wider than from the *a-* to the *e*-position. *E* then lies between *a* and *i;* we now have the front side of the well-known vowel triangle:



Scarcely less characteristic of the German vowel-system than the two above-mentioned features is the following: In pronouncing a word beginning with an accented vowel (either long or short), the German does not start out immediately with the voiced sound, but with what musicians call "a stroke of the glottis"—an explosion caused by closing and opening the glottis. As this so-called glottal stop or *Kehlkopfverschluss,* does not find expression in writing, foreign teachers of German are often as little conscious of its existence as are the Germans themselves. It is a real consonant and is described by Viëtor as a "schwacher Hustenstoss," and can perhaps best be learned by uttering a suppressed cough. Compare the English exclamation of surprise "Oh!"

a. Long Vowels

1. The long English vowels have a tendency to turn into diphthongs.

Especial care is therefore necessary in pronouncing *ē and ō*, which are pure vowels. In English words like *slate, day,* the vanish of an *i;* in such words as *go, grow,* the vanish of a *u,* is heard after the vowel. The German vowels end with the same sound with which they begin; that is, the position of no organ of speech is changed during their utterance.

2. The shortening of German vowels in accented open syllables is erroneous.

The quantity prevailing in Modern English was once shared by German. At the beginning of the New High German period, however, a general lengthening took place according to a well-established law.[2] Therefore pronounce: *ē-del = Ethel, Lē-ber = liver,* etc.

b. Short Vowels

1. German *ŏ* is, according to Hempl,[3] for English-speaking people one of the most difficult sounds to acquire. In English *not, copper* the German is apt to hear an *a.* German *ŏ* is a short, open *o*-sound; English *ŏ* is the short sound of *a* in English *law.* The German *ŏ* is a mid-vowel, the English *ŏ* is a low vowel. The German sound occurs in the New England dialectic pronunciation of such words as *stone, road.* Contrast the pronunciation of *Gott* and *got!*

2. Short German *a,* not existing in English. In pronouncing words like *Band, Lamm,* there are two mistakes to be guarded against: (1) Do not make the sound of English *band, lamb,* where the tongue, raised toward the palate, articulates a vowel not occurring in German. Flatten the tongue, and the mistake will disappear. (2) Do not substitute the English *a* of *father.*

[2] Wilmanns *Deutsche Grammatik* (Strassburg: Karl J. Trübner, 1897), Vol. I², §§ 238 ff.

[3] George Hempl, *German Orthography and Phonology* (Ginn & Co.), § 210, n. 3.

c. *The Modified Vowels*

In a previous exercise it was shown that the tongue position remains the same in making *i* and *ü*, and also the same in making *e* and *ö*. Hence: Speak or sing *ī* and, while doing so, protrude the lips. Repeat the process with *ē*. The more difficult *ö* is not identical in sound with the vowel in English *but!*

d. *Unaccented Vowels*

What is the pronunciation of such words as *reden, leiden?* In any pronunciation we have to distinguish between emotional utterance—as, for instance, the pronunciation of the stage, which, moreover, must consider distant effects—and that of ordinary intercourse. In colloquial German *red'n, leid'n,* are monosyllables, the post-tonic *e* is not heard, and the *n*-sound immediately follows the *d*. *D* is thus not formed as ordinarily by the air escaping between the teeth, but instead by escaping through the opened velum into the nose. This nasal *d* is a weak sound, and therefore unfitted for the stage, which uses the dissyllabic form of these words.

In concluding, we wish to emphasize that all phonetic exercises should be commenced in English.[4] The teaching of a faultless pronunciation in a foreign language is naturally an impossibility in a school where the pronunciation of the mother-tongue is neglected.[5]

[4] See Laura Soames, *An Introduction to Phonetics* (English, French, and German); new edition, revised by Wilhelm Viëtor (Swan, Sonnenschein & Co., London, 1899).

[5] F. A. Blackburn, "A Neglected Branch of the Teaching of English," *Publications of the Modern Language Association of America,* Vol. XXI, No. 4, pp. lix ff.

VARIATIONS IN THE PRONUNCIATION OF FRENCH*

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The few remarks I shall make about the various pronunciations of certain French words will deal exclusively with normal French such as we all teach. Although I shall glean my illustrations from points of the French territory often far apart from each other, I shall not touch upon the difficult subject of dialects, but shall confine myself to that portion of the people who intend to speak good French. Neither shall I treat of accent, but shall consider only individual sounds or words. Perhaps this needs a word of explanation. Given four fairly well-educated persons having learned at school the same kind of French; one from Paris, one from Marseille, one from Caen in Normandy, and one from Tournay in the Walloon part of Belgium. Supposing that they have never left their respective native towns for any length of time, if we let them read a simple passage or utter a few familiar sentences, the same for all four, we shall in all probability detect enough difference in their pronunciation to enable us to say approximately from what part of the French-speaking territory each one comes. We might say, in the present instance, that the Walloon's utterance was comparatively heavy, somewhat drawled, and on the "sing-song" order; while that of the Parisian was clear-cut, crisp, and vivacious; and similarly for the others. Yet all four used the same words and pronounced them, taken separately as single words, exactly alike. Whence, then, came the difference in the general effect produced on the listener? For want of a better word, I should say that it was due to accent—a much more subtle matter to define than mere divergence in the pronunciation of individual sounds; for it depends on pitch, voice-quality, sentence-stress, and other factors, which in turn depend upon racial characteristics, personal idiosyncrasies, influence of neighboring tongues, etc. All this comes out much more strongly

* Read before the conference in the Romance Department.

in the utterance of whole sentences than in separate words. This accent could probably be determined, analyzed into its component parts; although I do not know that it has as yet been done. But what I am trying to convey is that divergence in the pronunciation of words or single sounds forms but a small part of the accent. The true pronunciation of words may be learned by anyone, no matter where he lives; an accent is acquired only on the spot or by personal contact with one who has it naturally. Every region has its own accent, good, bad, or merely tolerable. The only good French accent is to be found in Paris, and it can be acquired only in Paris or from Parisians, or perhaps through the medium of the phonograph.

Leaving this element out of the question, we may say that there is today only one French language taught in the same manner all over France, Switzerland, Belgium, and the French colonies or former colonies, the standard being everywhere the same; but that there are a number of words and a few sounds the pronunciation of which varies slightly from one city to another, and even among the inhabitants of the same city. The causes of this divergence are in the main the following:

1. The importance of Paris as the political, intellectual, and artistic center of France has imposed the pronunciation of that city, as it has imposed its fashions, on the rest of the French-speaking world; but, as the copied *article de luxe* always lacks the something inexpressible, commonly called Parisian *chic,* so the pronunciation of Paris by non-Parisians lacks the particular flavor found only in the true Parisians.

2. Fashions change frequently, and so does the Paris pronunciation, though less often than the cut of clothes. Now, the provinces, being temperamentally more conservative, have not always kept pace with the capital; hence we find in provincial towns some pronunciations which are correct, but slightly archaic, though not exactly inaccurate or dialectic.

3. Orthoepists, grammarians, and lexicographers have not always been willing to concede the absolute supremacy of Paris in matters of language usage. Littré is one of those who are prone to condemn too pronounced Parisianisms and to teach pro-

nunciations which are dead or dying. Such authorities are listened to more willingly in the provinces, where people are perhaps always more or less conscious of their shortcomings; and this explains the fact that some words are pronounced at many points of the French territory and by old people in Paris in a manner no longer approved by or familiar to the younger generations of Parisians.

4. Orthography is no less potent a cause of divergence in pronunciation. Many words are very often written and printed, though seldom used in conversation. Such, for instance, is *gageure,* now generally replaced by *pari.* Often these words are met with for the first time after people have left school, when reading becomes more extensive and varied. The traditional pronunciation being lost, the majority of people will pronounce these words as they are written, or will get their pronunciation from others perhaps no better informed. The usage of one public speaker may become that of a whole district, and the orator may have used the wrong pronunciation. Proper names are often subjected to such ill treatment. Thus *Montaigne* is now generally pronounced *Montègne,* owing to the sixteenth-century spelling of that name with *ai.* Foreign words are still more exposed to a similar fate; with them the law in Paris is that of least resistance: the foreign word is simply frenchified with true Parisian breeziness. Not so in the provinces; your provincial is either more conscientious or more timid, and will usually try to give the foreign word a sound nearer the one which it has in the language from which it was taken.

5. Finally we must make allowance for the personal element. Words may be pronounced differently by people born and reared in the same street, and even by the same person at different ages or in different moods. Abbé Rousselot says:

> I do not know a single word which has the same pronunciation for all French readers. . . . . The quality of the vowels varies according to regions, sometimes in the same place from person to person, according to the place the word occupies in the sentence. . . . . I have heard Parisians pronounce *tête* with short close *e* before another word and with short open *e* at the end of a sentence.[1]

[1] *Revue des patois gallo-romans,* Vol. I, p. 11.

Professor Koschwitz, of Marburg, has made detailed observations as to the local peculiarities of pronunciation in various parts of France. The results of his investigation are published in the seventh supplement of the *Zeitschrift für französische Sprache und Litteratur.* Everyone is familiar with the same writer's *Les parlers parisiens.* Most of my illustrations are drawn from these two works, although several others dealing with the subject of orthoepy have been consulted. Owing to lack of time, I can consider only a few cases of divergence, and shall limit myself to certain words containing the vowels *a, e, o,* the digraphs *ai, oi, ui,* and the nasal vowels. One or two consonants will also be considered.

Rousselot distinguishes mainly three kinds of *a,* which he calls medium or neuter *a,* as in *la, tu as, casque, albe, lac,* etc.; open *a* (*à*), leaning toward *e,* as in *car, char, part, parisien,* which many people do not distinguish from the medium *a* and which is lacking in many parts of France, though common in Paris; close or deep *a* (*á*), tending toward open *o.* This is likewise lacking in certain portions of the country, especially in the south, where most *a*'s are open or clear. In Canada, on the contrary, all *a*'s have become very close or deep. The distinction of medium, open, and close applies to all other vowels as well. Besides this, they may be long, short, or semi-long.

In *tu as, tu viendras, tu tombas, il a,* etc., so then mainly in the first, second, and third person present indicative of *avoir,* in the second and third person of the preterite and future, the Genevese and Lyonese use close or deep *a,* while the Parisians use medium *a,* although close *a* is heard also in Paris.

In *allâmes, allâtes,* and *qu'il allât,* Ploetz[2] states that *a* is pronounced by many long and by some short, but that it is of little concern which *a* one uses; a view in which Koschwitz concurs.

The termination *-ation* in words like *nation, ovation,* is frequently heard with long-deep *a* in Paris whenever the word has the sentence-stress. This is the usual pronunciation of the Paris *gamin.* When less stressed, *a* is semi-long; but frequently even in Paris a short *a* is heard, and this is the regular pronuncia-

[2] *Systematische Darstellung der französischen Aussprache* (Berlin, 1897).

tion of those words in Lyons, Provence, Languedoc, Gascony, Picardy, and Belgium. Rousselot says that the *a* in such words varies from short-medium to long-close or deep *a*, but that the best Parisian usage demands it with short-close or deep *a*.

The group *asse*, either at the end or in the body of words, like *passe, passer, passage*, offers considerable difficulty. Here orthoepists do not agree, and usage varies in the various parts of the country. Sachs[3] prescribes semi-long open or clear *a* for all such words: *pàsser, pàssage, làsser, damàsser, échàsse*. In Lyons two persons were tested, one of whom pronounced *pàsser, pàssage, làsser, damàsser* but *échásse;* the other, *pàsser, pássage, lasser,* (medium *a*), *damàsser, échàsse*. The two persons questioned in Geneva also varied between open and close *a* without any consistency. In Paris the same lack of stability is observed. The conclusion then is that no rule can here consistently be established.

The ending *able* is no less disputed. Plud'hun in *Parlons Français*, a little treatise on pronunciation intended for the Swiss, says: "*sable, diable,* and *fable* are always pronounced with short *a* in Geneva;" but Koschwitz maintains that he always heard those words with a deep *a* rather long. In the words *agréable, durable,* and *table* the Genevese use long *a;* Plud'hun demands a rather short *a*. Witnesses gave for Lyons *sâble, diâble, fâble* (with long-deep *a*), as recommended by Ploetz, Lesaint,[4] and Thurot.[5] Littré[6] and Sachs[7] call this antiquated and recommend a semi-long *a*. The adjectives *agréable, durable,* the nouns *érable* and *table,* had in Lyons semi-long deep *a*. In Paris we find *sable, diable, fable* with long-deep *a, agréable* with medium-deep *a, durable* with open *a, table* with medium-deep *a*. However, in conversation, where the ending is often abbreviated to *-ab'* the *a* becomes short and open. Where the word has the

[3] *Encyclopädisches Wörterbuch der französischen und deutschen Sprache* (Berlin, 1902).

[4] *Traité complet de la prononciation française* (Halle, 1890).

[5] *De la prononciation française depuis le commencement du XVI^e siècle;* 2 vols. (Paris, 1881–83).

[6] *Dictionnaire.* [7] *Op. cit.*

stress, even the adjective has deep *a*. It is this difference, due to stressed and unstressed position, which is the probable cause of the disagreement among orthoepists.

For *damner, damnation,* the pronunciation heard in Paris is with both open and close *a* in the stem, the close *a* being that recommended by Rousselot; as for *condamner,* only deep *a* was heard by Koschwitz in Paris. In Lyons pretty near the same condition obtains; in Marseille and Tours, only open or clear *a* was heard; in Caen, only close or deep *a*. Sachs demands *dàmner;* Lesaint, long *a* without indication of quality; the Academy is silent on the subject. Again it is impossible to formulate a rule, since usage varies widely.

Accabler is pronounced with long-deep *a* in Paris, according to Koschwitz, Rousselot,[8] and Hatzfeld;[9] but Rousselot adds that even in Paris we frequently hear medium *a,* probably in the mouth of provincials. Sachs prescribes open *a,* which is the pronunciation of Geneva (without exception), Lyons (where, however, the Parisian medium *a* is also heard), and Tours, Montpellier, Caen, and Amiens agree with Paris. In the northeast the *a* is deep and long, in accordance with the general tendency of that region.

In *baron, marron, carré, carreau,* the south uses generally open or clear *a;* the center, medium *a;* and the north, including Paris, deep *a*. In Geneva no uniform rule exists for these words, although open *a* seems to be preferred.

Il bat and *combat* should have deep semi-long *a* according to most orthoepists. In Geneva a short open *a* is common. In most of the Walloon regions a very deep *a* prevails, though this is considered incorrect.

For *acclamer* Littré and Sachs recommend short open *a;* Hatzfeld, semi-long open *a*. But in Lyons and Paris, and doubtless elsewhere, a deep *a* is frequently heard.

It is wrong, according to Koschwitz, to prescribe a deep *a* for *flamme,* as nearly all orthoepists do. Ploetz noticed that on the stage this word had always deep-long *a* in the figurative meaning

[8] *Précis de prononciation française* (Paris, 1902).

[9] *Dictionnaire.*

of "love," while in its ordinary meaning it was given either long or short *a*. The same distinction seems to be made everywhere. In Paris the best-educated people hesitate between long-deep and semi-long medium *a*.

Let us now leave *a* and see what is the fate of *e*. In *atelier, aqueduc, lourdement, Charlemagne,* and *parce que,* words in which *e* is generally dropped in Geneva, it should be pronounced according to Plud'hun; Koschwitz grants this only for *atelier, Charlemagne,* and *lourdement,* although even in these words a pause may take the place of *e*. In many regions *atelier* is popularly pronounced *ati-yé*. For *aqueduc* the pronunciation in Geneva, Lyons, and Paris is without exception *akduc*. *Parce que* is generally pronounced *parske,* which offers no more phonetic difficulty than *lorsque*. A general rule for mute *e* is impossible. In the south of France there is a strong tendency to pronounce all mute *e*'s both in the body and at the end of words, whereas the north is inclined to suppress them everywhere—a process in which Paris has perhaps gone farthest, at least farther than Geneva. This seems in accord with the familiar rule that Latin unstressed *a* has become mute *e* (often not pronounced, as, e. g., in *rose*), in the northern Romance dialects, whereas in the southern, Provençal, Spanish, Italian, this *a* has persisted. Curiously enough in Belgium the mute *e* in the body and at the end of words is sounded; thus we hear in that region Genève, venir, where Frenchmen would say G'nève, v'nir.

The pronunciation of *les, des, mes, tes, ses* has been a favorite topic with all orthoepists for centuries. For modern times Littré, Thurot, Lesaint, Sachs, and Ploetz agree in the main in prescribing open *e* for these words. Koschwitz (in his grammar) did the same, but his confidence was shaken when he found that Clédat, in his *Précis d'orthographe et de grammaire phonétique* (1890), recommends *lé, dé, mé,* etc., *in all cases. Legouvé,* in his *Art de la lecture,* states that in conversation close *e* is used, and that young people say constantly: *"Prends donc tés livres."* On investigation, Koschwitz found that at Geneva they use generally *lé, té,* etc.; at Lyons, without exception, *lé, té, dé,* etc.; at Marseille, without exception the same close *e;* at Vaucluse, close

e; at Montpellier, and Bordeaux, close *e;* at Tours, a semi-open *e* when alone, but close *e* before consonants in conversation; at Caen, generally close *e;* at Amiens, always close *e.* I shall add for Belgium close *e* in the Walloon region, while the Flemings use generally open *e;* but let us remember that the latter learn French as a foreign language, and are therefore less under dialectic influence.

In Paris actors are taught a pronunciation with open *e.* Dupont-Vernon, the well-known actor and professor of elocution, says in his *Art de bien dire:* "Prononcez comme s'il y avait è dans les mots d'une syllabe les, mes, des, tes, ses: je demanderais même que pour ces mots l'accent fût figuré dans le dictionnaire, car presque tout le monde les prononce avec l'accent aigu, et c'est une habitude déplorable." There is no dissenting voice among actors and their teachers. Among scholars and orators it will be found that in conversation most of them use a close *e,* while in public speaking the tendency is toward open *e.* The lower classes of Paris use only close *e* for speaking, reciting, and reading. Our conclusion, then, would be that the best usage demands a conventional open *e,* especially for public utterances, but that the majority of French people use close *e,* which may eventually be prescribed. Rousselot remarks: "les, des, ces, ces ont régulièrement des *e* fermés; l'*e* ouvert est introduit par l'enseignement."

The words *hennir* and *nenni,* which according to the older orthoepists, and even according to Rousselot, should be pronounced *anir* and *nani,* are more and more commonly pronounced *ènir* and *nèni.* This is for *hennir* the case, for cultured and uncultured alike, at Lyons, Marseille, Montpellier, Tours, Paris, and Caen. *Anir* only was heard by Koschwitz at Bordeaux and Amiens. Thurot says: "Cette prononciation (anir) est tombée en désuétude." The Academy makes no recommendation in the last edition of its dictionary. *Nenni* is pronounced *nèni* at Lyons, Tours, Paris, Geneva, and in Belgium, in the Walloon provinces.

For *enivrer, enorgueillir,* the orthoepists teach a pronunciation with nasal *a,* but the words are also pronounced with *ène.* The confusion seems indeed so great that Koschwitz concludes

that the rules given are merely theoretic, since everybody pronounces as he pleases. In Paris, Marseille, Tours, Amiens, and Caen both forms are heard. The same uncertainty prevails for *anoblir;* but here it seems that either Koschwitz or his witnesses have failed to distinguish between *anoblir* ("raise to the peerage") and *ennoblir* ("exalt," "dignify"). The divergence can apply only to *ennoblir.* Koschwitz does not seem to have met with the forms *énivrer, énorgueillir,* which I know to be in use. I found recently *énorgueillir* in a poem by Jules Gros,[10] a Swiss from the canton of Vaud, whose use of French is normal in all other respects.

Littré and Sachs recommend the pronunciation *indămnité* and *indmăniser,* for *indemnité, indemniser,* while others prescribe *indèmnité,* etc. Ploetz remarks that the latter is becoming more fashionable. Koschwitz' witnesses were about evenly divided on that point; he concludes, however, that the more modern *indèmnité* should be preferred.

Final close *é* is often lengthened in the Walloon provinces of Belgium, where *donné, bonté,* become *donnée, bontée.* In the Flemish part of the country this *é* is often diphthongized to *ey,* but this is considered vulgar.

We may leave the vowel *e* with Rousselot's remark:

> The quality of *e* varies enormously with the region, and goes through all possible shades from long and very open to long-close. Local dialects, the lack of sufficient orthographic signs, and the often unreasonable corrections of teachers, lead to extremes. The exact shades are found only in Paris, where the language is learned not from books, but by ear, and where the influence of teaching is almost *nil.*

The shades of *o* are hardly less numerous and hard to keep track of. Long *o* is pronounced close in the east when final, but when followed by a consonant it is often open when in Paris it would be close. Thus at Verdun, in the northeast, and at Bordeaux in the southwest, *chose, autre,* which should have the close *o* sound, are pronounced *chòse, òtre.*

Final short *o* is close in Paris (*gigót*), but open at Angoulème and Bordeaux (*gigòt*). The *o* of *émotion* is close in Paris, but

[10] "Théoduline," poème valaisan, in *Collection dès poètes français de l'étranger,* edited by Georges Barral. Paris: Fischbacher, 1906.

open at Angoulème. *Octobre* is pronounced octóbre in the department of Haute Marne: *écŏle* becomes *écòle* at Zordeaux, Agen, and other southern towns.

Open *o* is lacking in certain regions, where it is hardly distinguished from *œ̂*, *corps* being pronounced almost like *cœur*. Some pronounce pretonic *o* like a species of mute *e* or *œ*: *moment* becoming *mœment;* this is common in Paris.

Let us now consider a few of the digraphs, and first *ai*.

The present *j'ai*, the perfect in *ai*, the future first person should be pronounced with close *e* sound, according to the orthoepists. But in many regions even cultured Frenchmen use open *e* in all such cases, the perfect having, however, more generally the close sound. The same remark applies to the adjective *gai* and the verb forms *je sais, tu sais, il sait,* pronounced with close *e* in Montpellier, Bordeaux, Paris, Amiens, but with open *e* in Geneva, Lyons, Tours, Paris (popularly), and Caen.

In Geneva, Lyons, Marseille, Amiens, and Belgium one often hears the present participle of *faire* and the tenses formed from the present participle pronounced *fèsant, fèsais,* etc. This is a survival of an older stage of the language.

The digraph *oi* is variously pronounced. Rousselot represents it phonetically *wa* (with medium *a*) or *wà* (open *a*). But he remarks that old people and provincials frequently pronounce *bwát* (*boîte*), *crwáz* (*croise*), *parwás* (*paroisse*). In Paris, people of sixty, and young people who have been under their influence, use this pronunciation; people of forty-five say *bwāt, crwāz, parwās;* while young people generally use an open *a* and pronounce *crwàz, parwàs,* the evolution being from close to open *a* tending toward *e*. At the same time, in many parts of France we hear *wè* for this digraph—an old pronunciation to which the modern Paris custom evinces a tendency to revert. Again, many Frenchmen pronounce *oa* instead of *wa*. The best speakers use the two forms apparently in the same breath.

It is an eastern habit to pronounce close *œ̂* in words like *œveugle, jeune, neuve, fleuve,* etc. It is met with pretty generally around Geneva, Lyons, and sporadically in Paris, even among cultured people.

Rousselot says that in the neighborhood of Liège *puis* is pronounced *pwi*. He might have made his remark more general, for such is the pronunciation of *ui* all over Belgium; even in Paris *jw-in (juin)* is heard in the same breath with the correct *jü-in*.

Quintuple and *quiétisme* were pronounced *qu-intuple* and *qu-iétisme* by eight people out of ten questioned by Rousselot, while two said *kintuple, kiétism;* five said *équ-estre, équ-itation,* and five, *ékestre, ékitation;* seven said *aigu-ille,* three *aigh-ille;* one said *aigu-iser,* nine *aighiser;* two *Gu-ise,* eight *Ghise;* four *Gui-yo* (Guiot), two *Ghi-yo,* and four *Gü-yo*.

In *extinguible* the *u* should be heard, according to the Academy and to Littré, but Koschwitz heard only *extinghible* both in Paris and in Lyons. As to *équestre* the orthoepists are fairly unanimous in prescribing a pronunciation with *u*, yet *ékestre* seems to be the only pronunciation heard by Koschwitz from Marseille to the north, including Switzerland, but we saw above that Rousselot's witnesses were evenly divided. Conclusion: The tendency is manifestly to eliminate the *u* element from all such combinations, and, if it persists, it is due only to orthography. Even in the combination *qua* the same law is at work and *loquace* is pronounced *lokas* more often than *lokwas*.

In the south of France the nasal vowel is seldom heard alone, there being always a vague *m* or *n* present; thus *ãʃã* is pronounced *ãnʃãn; vẽ, vẽn;* etc. In the north *ã̃* tends to pass into *õ̃* and, vice versa, *õ̃* into *ã̃*, a frequent occurrence in Paris. In Paris and in the provinces the indefinite article *un* often becomes *ẽ̃;* this is especially common among Walloons. The careless pronunciation of *bien* as *bẽ̃* is common in France and Belgium, but it is not to be recommended.

The best discussion of the sounds of *r* is found in Beyer's *Französische Phonetik*.[10] In France, as in Germany, Belgium, and Holland, the lingual and the uvular *r* are met with; in Paris the latter is the only one considered fashionable at the present time, the lingual *r* being considered provincial. Yet on the stage and for singing purposes the rolled *r* is the only one taught. In the provinces the lingual *r* is still faithfully adhered to. The

[10] Cöthen, 1897.

matter might be roughly summed up as follows: Lingual *r* practically general among country people and in small towns; uvular *r* in Paris and vicinity; hesitancy between lingual and uvular *r*, with an increasing tendency toward the uvular, in cities outside of Paris.

Paul Passy remarks that at a congress of elementary teachers held in Paris in 1887, at which were present 2,400 teachers from all parts of France, three-fourths of the speakers used the lingual *r*. Among prominent people tested by Koschwitz for his *Parlers parisiens*, the following used lingual *r*: Zola, Edouard Rod, Gaston Paris, Ernest Renan, Charles Loyson (Père Hyacinthe), François Got, Henri de Bornier, François Coppée, Sully Prudhomme, Leconte de Lisle.

In the south of France the lingual *r* is strongly rolled, especially in words where it is written double. In Belgium the lingual *r* is natural to most people, although in the cities the uvular is spreading under Parisian influence.

Which *r* shall we adopt? If the Parisian standard of pronunciation is to be our supreme law, then let it by all means be the uvular *r*, provided we succeed in pronouncing it perfectly; but, as Rousselot says, in the mouth of the true child of Paris it is very sweet sounding, while the imitation of it is often disagreeable. If the student has naturally a good lingual *r*, it might be just as well to let him stick to that. My experience is that to English-speaking students the lingual *r* offers less difficulty than the uvular.

The so-called *l mouillée* has practically disappeared from normal French. It is heard only under dialectic influence in Switzerland, in the extreme south—at Marseille, for instance—and in the extreme north—in Belgium. We know that Littré severely condemned the modern pronunciation of *l mouillée* as a *yod*. His protestations have been of no avail.

Owing to the orthoepists, there is a good deal of hesitancy about the pronunciation of the words *scintiller* and *vaciller*. The tendency is everywhere and among all classes to say *scinti-yé* and *vaci-yé*, in spite of the dictionaries, which demand generally *scintiler* and *vaciler*. The same hesitancy exists in the case of

osciller, although *osciler* seems to be still more used than *osci-yer.*

Aspirate *h* does not exist in modern French pronunciation, at least not admittedly; its only function is that of preventing elision in certain cases. Yet sometimes in an emphatic utterance, it is heard even in Paris. In certain provinces it is still quite common, in spite of the rule that it should never be heard; thus in Brittany, Lorraine, Gascony, Bearn, and throughout Belgium.

The *ch* in words like *Machiavel, archiépiscopal* is by some pronounced like *k*, by others like *sh;* no rule can consistently be laid down in the presence of the unstable usage that prevails.

The letter *p* is pronounced by some and omitted by others in words like *sculpter* and *dompter.*

X is pronounced *ks* and *s* in *Auxerre* and *auxerrois, Bruxelles* and *bruxellois.* However, in Belgium *s* is exclusively used for the last two. Koschwitz was misinformed when he wrote that *Bruxelles* is pronounced *Bruksel* in Belgium.

Although the foregoing remarks can lay no claim to completeness, enough has been said to show that the pronunciation of French is far from being uniform in France and even in Paris. The only place where uniformity may be said to exist is the stage, and even there keen listeners might detect small differences from actor to actor. We know, moreover, that the quality of vowels does change slightly with the nature of the utterance, which may be lofty or trivial, emphatic, passionate, etc., and with the position—stressed or unstressed—of the word or the syllable in which it occurs.

Good usage should be our guide—that goes without saying; but it must be borne in mind that absolute good usage is nowhere to be found; nor is this absolutely necessary. The ordinary conversation of Parisians of a fair amount of culture is good enough to serve as a model to foreigners. We may fully indorse Rousselot's words: "It is obvious that what (in matters of pronunciation) is not displeasing to the educated Frenchman cannot be offensive to foreigners. Here too much purism is out of place. What is most important to a foreigner is to get rid of his nationalisms, and in that he cannot be too careful."

GREEK AND LATIN

EQUAL RECOGNITION FOR GREEK WITHOUT DISCRIMINATION

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The influences at work against the study of Greek may be brought under two general classes: those outside of the schools, intensified by the spirit of the times; and those directly due to school legislation and administration. Any effort in the interest of Greek will therefore direct its attention to corrective measures in matters of legislation and administration, and to constructive measures in widening the sphere of Greek influence.

The statistics at hand plainly show that the recent decrease in the number of students who take Greek is chiefly the result of school legislation. Dominated by the idea of quantitative acquisition, our Herbert Spencers attempt to shift the meaning of education from *educare* to *educere*. Boys and girls are pushed on in studies with almost breathless impetuosity. They are mentally old before they have come to youth's estate. Sweet boyhood and girlhood are fairly crushed out of life. The delightful period of a natural school life, the rightful heritage of the boy and the girl, is, or is fast becoming, a mere incident. Life is too short for studies that touch the spirit and quicken the imagination.

If a teacher of Greek have convictions and ideals, a duty now lies before him. He owes his service to education. He may stand for the rightful study of Greek in the shaping of a better education. He cannot be an extremist. This would not be in accord with Greek conceptions of the ideal. Extremists in education, whether for the humanities or for the utilities, as earthquakes in the physical world, may in a wise and far-seeing providence serve as shaking-up forces; they have no place as adjusting and constructive agents. It is reasonable to expect that extremes in curriculum and methods will disappear as the present seeming chaos takes the form of a cosmos. It is toward such an educa-

tional world that one may turn his hopeful gaze, and bend his hopeful endeavor, not as a special pleader for the study of Greek, but with the assurance that in such an educational cosmos Greek will of necessity have equal rank among studies that train and enrich the youthful mind for a life of high ideals and endeavor.

To this end it will be in the interest of Greek to correct the evils of the elective system. In its present form it may fitly be described as education *ad libitum*. The idea of one study leading up to and fitting in with an orderly and consistent development has little recognition in the devotion to this latter-day fetish. Its encouragement to mental dissipation in the college is deplorable; in the secondary schools it is demoralizing. Lines of least resistance are aimlessly followed. The rush for credits claims the right-of-way. In this educational vortex students most in need of the guidance, of the tempering discipline of the schools get through them untouched by their refining fire. Can we appreciate the effect of eight years or more of this credit-seeking style of education upon the moral fiber of the boys and girls who are later to take up the responsibilities of life?

The degree of B.A., the only degree that meant anything in the educational world, has not escaped the ambitious legislator. It was an earned degree, had no honorary fringes, and stood for a definite accomplishment. It had a distinction and standing that was unquestioned. With electives in the schools students coveted what the degree stood for without the willingness to meet its requirements. And now the high-handed attempt is under way actually to steal this degree. The preservation of its integrity is a corrective measure which may be insisted upon fairly in its own right.

The discrimination against Greek in the high schools is not American. It is autocratic. It is a discrimination against one class of tax-paying citizens to the advantage of another. It is at variance with the nation's purpose in education. It marks an attempt to degrade education to commercial and material purposes. Commissioner Draper, of New York, is a sounder and safer expounder of education in America than those who would turn the schools from their educative purpose into charitable

institutions, and to the plane of the workshop and the business school. In his address before the National Educational Association, in 1905, he says:

> The educational purpose of the nation reaches forward to the very mountain tops of human learning. . . . . It stands for a balanced educational system, ... in which everyone may find what he will, may go as far and as high as he will, and not for a system which dignifies any interest or aids any class against another.

Any scheme of education that bends its energies to turn boys and girls into wage-earners in the quickest possible time, to the neglect of their training in things of the spirit, is unworthy of a free people and is unspeakably dangerous to their institutions. The boys and girls in America, whether poor or rich, must have their aspirations encouraged. Mrs. Browing wrote: "It takes a soul to move a body." The children in the schools are to perfect this soul to be the directive force in life. If poor, they may not stop at the level of the English peasant. They may aspire to higher things. They may wish to study Greek, and no one has the right to deny them this. Is it the people's will that in the great city of the Central West Greek is taught under a proviso sufficiently rigorous to put it under a ban? Is it not time to urge that a study so vitally interwoven with all the highest interests and doings of life—literature, art, the theater, the church—and conceded to be incomparable in training the imaginative, the reasoning, and the observing faculties, should be accorded recognition in the curriculum on equality with other high-school studies? The time is opportune when Mr. Charles Francis Adams[1] emphasizes its importance in education in his impressive confession, and when we are told by medical men and engineers[2] in one of the foremost universities in the land that the modern languages have failed to meet the needs of their students, and in telling words make a plea for the Greek and Latin training.

As a study thus recognized in the curriculum, Greek is to be studied for itself, for the treasures it has to bestow. It is a mistake to study it as a make-shift or chiefly as a mental discipline —a mistake that has worked harm to the proper study of Greek.

[1] In his Phi Beta Kappa address at Columbia University, June, 1906.

[2] Classical Conference, Ann Arbor, Mich., March, 1906, *School Review*, June, 1906.

Studied with the aim to attain power in the language, interpretation becomes the goal. A student trained to read his Greek passage in the Greek with expression, responsive to the thought, outclasses the translator. He becomes an interpreter. Concentration has been always at its best. His mental discipline has been of the finest quality, and he is in a position to make Greek serve him at first hand in all lines of thoughtful endeavor.

The writer ventures to suggest the following change in the curriculum. Due to a wide-spread feeling that there is not time for two ancient languages, Latin is given the preference. Without raising the question of the relative merits of the two languages, would it not be an equitable adjustment to give students their choice to take Greek or to take Latin, and let those who choose Greek leave out the Latin? This would give those who take Greek time enough to study it to advantage. If afterward they may wish to take up Latin, they will have the advantage of their Greek, and will come to the Latin in the historical order.

These are some of the correctives in the interest of Greek. The constructive endeavor, really the one of chief importance, is concerned with the public. The influences adverse to Greek are at work among the people at large. The influences themselves wherever present will be permanent in their hostility to Greek, as they are to education in general; but the public is not to be so considered. The public is open to enlightenment. It contains many intelligent, earnest minds aspiring to the best things. To these the Greek may and ought to address himself. It is wrong to assume that Greek has nothing for them, and that they have no desire for Greek. In standing for the education of the spirit, the Greek teacher has a mission. Shall we be true to this mission?

Greek has yet to meet its Marathon. The Athenians will not send earth and water. Though Sparta may be tardy and the prophets at Delphi may waver; though the Acropolis is profaned by the feet of the invader; there is Salamis; and out of it all will rise the Parthenon, the Lyceum with its Aristotles, and the Academy with its Platos. In those days Greek will receive its own in art, in science, in philosophy.

ANCIENT HISTORY AND THE CLASSICS

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There is at present in the educational world a strong tendency toward the co-ordination of studies and co-operation of departments. The assertion is made that, in the high school in particular, the application of this principle would lead to a great economy of time and better results from the educational standpoint. The department of mathematics and physics in the University High School is attempting work of this nature with a good measure of success. While I do not advocate anything revolutionary and am disposed to shun correlation as a fad, it is unquestionably true that good results will follow a proper application of the principle.

The field of ancient history seems to be a suitable one in which to test the truth of this theory. How can the study of this subject, coming as it does in the first year of the high-school course, be made to contribute not only to the confessedly historical courses which follow, but also more directly to the results which all true classical teachers are laboring to achieve? Is it not practicable to supplement the work of the classical department, by imparting a knowledge of classical culture in its historical relations, and even perhaps a taste for classical literature and art, in their broadest and most human aspects?

I have taken up the consideration of this subject under three general heads: (1) the training of teachers in ancient history; (2) the present course of study; (3) a proposed course of study.

It is doubtful if there are two methods of study which are so mutually corrective as the classical and historical. The application of the historical method to the study of classical literature, art, and life has thrown a flood of light on these fields of study. On the other hand, the obligation of the historical scholar to classical men and methods can be recalled by the mention of such names as Niebuhr, Mommsen, Ihne, Busolt, Meyer.

In the nature of the case, the teacher of ancient history should have adequate training in both methods of study, and it is essential that he should have very thorough training in one. The candidate for a position in ancient history should have gained that accuracy of thought and precision of method which we associate with classical study. He should have profited in breadth of thought and freedom of sympathy from the historical sciences. The most obvious faults in the teaching of this subject in the high schools would be corrected by a well-balanced training.

The classical department of the universities seems to be best fitted to give the training needed by the teacher of ancient history. In the University of Chicago, for example, the courses in ancient history, in the history of classical literature, in Greek and Roman political and historical writers, in archaeology, epigraphy, and the history of art, are fitted to give to the teacher a sufficient training in the principles of historical investigation. And what is even more important, these courses give him that close acquaintance with ancient life which is invaluable—nay, essential—to the teacher of ancient history. These courses should be supplemented by general courses in the history department. The mediaeval period and the Renaissance particularly should be studied.

It is a favorite idea of mine that a course in humanism should be offered by the classical faculty of the university. Its value would be as great to students of philology as to those in the historical field. This course ought to include the study of the transmission of classical culture from ancient times to the present, and an examination of the humanistic spirit in the writings of such men as Petrarch, Erasmus, Milton, Goethe, and the Arnolds.

In accordance with the report of the Committee of Seven, the majority of high schools allow but one year for the study of ancient history. I believe it is the opinion of the majority of teachers that the time is inadequate for anything but a hasty survey. The course in Greek and Roman history, as taught in the academies and classical schools, covered only Greek history to the death of Alexander and Roman history to the death of Augustus. It was purely narrative, devoted to the political and

military phases of history, and unduly emphasized those periods (such as the Peloponnesian and Punic wars) which are fully treated by the classical historians. The study of civilization was neglected, and there was little insight into the life of the people. Such a course lacked the vital elements of historical unity and perspective. But, while inadequate, it had the great merit that it was practicable in the time allotted to it. On the other hand, the instructor in ancient history is expected to cover the ground from the earliest times to the coronation of Charles the Great in 800 A. D. Thus oriental and mediaeval history are added to the field. Whatever plan is followed in organizing this course, the instructor finds that the time limits imposed prevent an adequate acquaintance with the source material, which seems to the writer of supreme importance in this field of history. It may be that the best solution of the problem is to allow two years to ancient history, with say three recitations per week, the two extra periods being used for informal readings from the sources. This plan allows for that close personal contact between the student and teacher which is essential to the most successful use of the source method.

The rational use of this method does not need any defense on this occasion. As classical scholars we are all believers in the principles underlying the use of the sources in historical study. In modern history that multiplication of the sources which is the delight of the investigator is apt to prove dangerous to the instructor and confusing rather than enlightening to the student. In the classical writers, on the other hand, the sources are comparatively few in number, and are of the highest intrinsic value apart from their usefulness as historical material. They demand and amply repay that careful attention, that concentration of the mental faculties, which is the foundation of true scholarship in any line. Even translation cannot obscure their supreme literary value and eternal human significance.

While writing this paper I happened upon Mr. Sissons' article in the *School Review* for November. In this article he sets forth a plan for a "Reading Course in the Classics in English." While I agree with the writer as to the great educative value of such

reading, I apprehend that the course in question would suffer from the lack of the co-ordinating element supplied by the historical narrative. If the classical literature is to be divorced from the original languages, should we not in compensation give these works their proper historical setting? It is doubtful if the four-year course, advocated by Mr. Sisson, could be adopted as it stands. The two-year course, which I have suggested, has the advantage of fitting into the course of study of many schools and being practicable for all. If the colleges and universities should agree to grant such a course two units' credit, a great obstacle to its adoption would be removed.

The plan is, in effect, an application of the laboratory method to the study of history. Its platform is the dictum that to understand history aright we must know how the people thought and felt. How direct and wonderful is the influence of such national movements as the Persian and Peloponnesian wars on popular thought and feeling, as reflected in literature and art! We have no such convincing examples in later history.

In the task of selecting the material to be used, the criteria of intrinsic excellence and historical significance should be applied. Some works might be read in part, others entire; some selections assigned for cursory reading, others for careful study. The informal readings with the instructor are an essential feature of the plan. The younger high-school pupils need training in apprehension even more than training in judgment. It is the experience of the writer that constant oral reading by both instructor and students is the most effective way to make the duller students realize the personages and events of history.

The stock objection to the use of translations, that these works can be fully appreciated only in the original, is granted, but still their historical significance remains in the translation. That the result of such a course is simply a deceptive smattering of classical literature is a case of viewing high-school problems from the focal distance of university work. It certainly is unjust to deprive the great majority of high-school students of a knowledge of the ancient writers, because they have not the time or inclination to become specialists in classical philology.

It does not need impassioned speech on my part to set forth the advantages of such a plan. In an age of specialization, what better corrective than the grounding in general culture which would result from such a course, what more valuable asset than an appreciation of the clear vision and sane wisdom of the ancients gained at the most impressionable period of the pupils' life!

MATHEMATICS

ON THE TEACHING OF SECONDARY MATHEMATICS

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By "secondary mathematics" I understand geometry, plane and solid, trigonometry, algebra, including the theory of quadratics, logarithms, progressions, the elements of permutations and combinations, the binomial theorem, the principles of indetermined coefficients, and a small amount of the theory of equations. This is more than the high school has undertaken in the past; but it has become necessary to include so much through the action of many colleges and scientific schools that require as much, or allow these advanced subjects to be presented as entrance subjects.

As I see it, the principal object for us secondary-school teachers to aim at is to interest the pupil and to awaken his love for the subject. We cannot flatter ourselves with the hope of being able to do this with every pupil; but with a large number it can be done, and the results, where this is accomplished, are so fine that I can conceive of no worthier object of a teacher's ambition. I owe, in my own experience, an abiding love for mathematics—a love which has been an impelling force—to an unusually stimulating teacher that I was fortunate enough to have at a decisive period of my life; a man that took me, so to say, on a high mountain and showed me a land of promise.

The idea that a love for mathematics can be awakened in many boys would seem quixotic to the public at large. The impression is widely spread that the mathematical faculty is a peculiar gift which is found in but few of the elect. That the results attained in the past in many colleges and schools have given color to this idea is unfortunately true.

The reasons are several. First: too low a standard of scholarship and pedagogical preparation has prevailed in the past.

A teacher that has not gone much farther than his pupils in the studies that he has to teach them cannot be anything but a poor mechanical drudge. Yet there must be many such even now; else the publishing companies would not find the issuing of complete keys to their elementary mathematical textbooks—algebra ponies, if you please—a paying business. The second reason, and a consequence of the first, is the so-called recitation method, the assigning of a lesson from the book, so many pages ahead, and the next day the hearing of the lesson from the book. There is no remedy for this particular evil but insistence on thorough academic preparation; for to the teacher who is master of his subject these monstrosities are impossible. But even the teacher who knows his business is much handicapped by the conventional sequence of subjects—the air-tight compartment system, as it has not inaptly been called. It is hard to break away, and there are severe penalties attached to such eccentricity.

It is usual to spend the first year of the high-school course in algebra, then another year in plane geometry, the third year in algebra (quadratics and review work) followed or preceded by solid geometry. It was our experience at our school that, when the third-year algebra came round, the students had forgotten most of their first-year work, so that it took all of six weeks to recover lost ground. So we began about five or six years ago to distribute algebra and geometry over the first two years, giving a considerable part of the time spent on geometry to work of a practical character, drawing a good deal, taking a number of propositions for granted, simply stating them and reasoning from them as if they were axioms. The results have been eminently satisfactory, to us at least, and I know that students taught on those lines were, at the beginning of the third year, superior to those taught in the old way. But when such a student, *at the end of his first year,* changes school and is told that he must go back and enter the first year in mathematics again because he has not covered enough ground to be admitted to the second year, it is not so pleasant. Few parents are qualified to understand pedagogical subtleties, even if they were inclined to listen to them, and what appears on the surface is warrant enough for

them to decide that their sons had been poorly taught: how else could they be behind others who began at the same point a year ago? However, improvement is impossible, unless there is breaking-away from old ways; and in the long run the fruits will fall to those who are at liberty to break away and who have the courage to do so.

If interest and love for the subject is of first importance, our next query will be how to arouse interest and awaken such love. First: At all stages beware of mechanical work and routine; strive to rouse thought. It must be *at all stages*. It must begin way down in the grades. When I test a new boy, I ask him: "How much is 5 times 67? If he begins: "5 times 7 is 35; carry 3; 5 times 6 is 30 and 3 is 33, makes 335," I know what training he has had. When I ask further: "How many times is ¾ contained in 15?" if he answers either not at all or, "Invert and multiply," I know all I want to know about him. With the real teacher it is head-work against finger-work all the time. We are still under the charm of the old fetish, *ciphering*, and many teachers that make an honest effort to give their students drill in mental work get no farther than teaching them to write their figures in the air insteal of on paper.

When the mechanics of written work are mastered, attention ought to be paid to short methods; even in mere computations brains ought to come into play all the time. In many computations, where we multiply numbers with several decimals, it is desirable to keep only a few in the result. It is stupid to figure the result out with all the decimals in the factors and then cut off the superfluous places after the determination of the decimal point. It is just as easy to determine the decimal point in the first place, from the integers, as the same law holds before the decimal point as behind. Then, after the decimal point is found, figure out only as many decimals as you want and drop the rest. I learned these things in the high school when I was fourteen years old, and I have practiced them ever since. There are other devices which there is not time to give, but which must be known to many.

It is one of the inherent difficulties in algebra to keep in

sight the connection between the letters and what they stand for. Evaluation of algebraic expressions, verification of equations, checking of results of addition and subtraction by substituting numerical values, help some. But with all that one can do, it is, I think, unavoidable for algebra, at least in the lower stages, to become largely a teaching of successive processes. And that is the reason why algebra has not nearly the culture value that it is possible to get out of geometry properly taught. The only place where you get out of mere processes into the realms of realities is where you reach problems leading to equations. I think it is a serious blemish on our algebra-teaching that so much importance is attached to processes and reductions and so little to the solution of problems. The colleges, at least many of them, foster this by demanding a degree of skill in the juggling of algebraic expression that exceeds the needs of the case. On the other hand, there is hardly one that dares put more than one problem on any examination paper, and I venture to assert that no student was ever refused the pass mark that omitted the problem, provided his juggling was even passably well done. In the schoolroom, however, this predominance of thimble-rig over thought is not specially felt as a deadening influence. Students at that age above all enjoy *doing;* they enjoy the learning of new processes, and the underlying thought-processes do not bother them much. It is the same stage of development that possesses a large verbal memory, that memorizes with ease, that is best suited to the study of languages, just because the acquisition of knowledge by imitation and memory is so much easier than by abstract thought, for which this age is not yet mature. Nevertheless, many times more time should be spent in problem-solving than is done now. We waste much time that could be made available for that. Neither I, nor anyone present, however far he may have gone in mathematics, has ever had occasion to find the H. C. F. or the L. C. M. by the process of division, except as an exercise in his schoolbook. We spend too much time in the reduction of complicated fractions and in the factoring of expressions containing more than four terms. It is interesting and instructive, it is said. I have no doubt that the processes of multiplication and division

with Roman numerals might be both interesting and instructive; why don't we do it? Many complicated expressions that our boys now labor over will be handled without difficulty later on, when greater maturity has increased their powers.

It is unfortunate that the conventional sequence of subjects almost precludes the taking-up of geometrical problems. I should not be afraid to anticipate some propositions, and treat them algebraically, both with numerical and literal values. A much wider field opens in the third year, after solid geometry has been studied. There is an endless variety of problems connecting algebra and geometry possible then; and I was pleased to find in a recent article by Mr. Lennes, of the Wendell Phillips High School, on secondary mathematics, which appeared in the May *School Review,* mention of the regular tetrahedron as a solid which I, like him, have found a fruitful source of interesting problems.

No opportunity should be lost to correlate the different mathematical subjects. I might say at this place that I see much more in the correlation of the mathematical subjects among themselves than in the wider scheme of correlating school mathematics with all possible phases of life. The only subject outside of geometry that seems to me at all promising is physics. But we study physics usually in the last or next to the last year of the high-school course, so that we can draw but few subjects of physics into the range of school mathematics without teaching them specifically, thus displacing the center of interest. Such subjects are: the relations between density, volume, and specific gravity, and the laws of parallel forces. I suppose you have all read the admirable article by Professor Myers in the October *School Review;* those who have not read it ought to. I must confess to some fear of confusing the mind of the student by the apparent complexity of the apparatus used; and if it were not for the greater ease with which Professor Myers' apparatus lends itself to lecture-table demonstration, I should prefer that which Professor Edwin H. Hall, of Harvard, has devised for the study of the same phenomena.

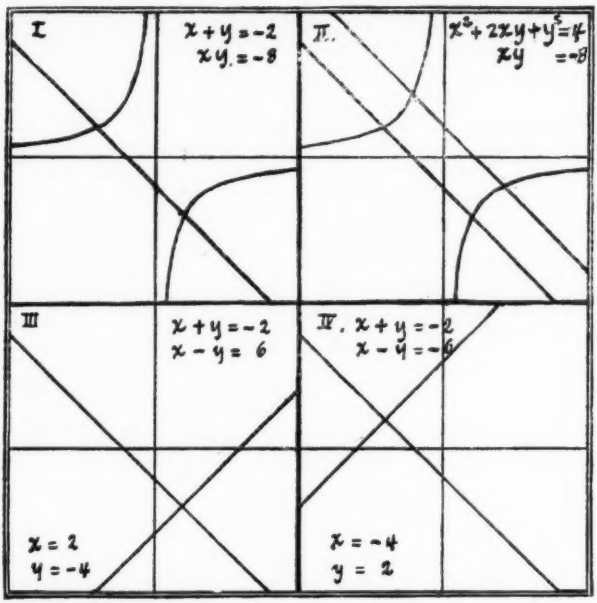
There is one point upon which I would lay great stress, namely, that the teaching of geometry should be liberated as

much as possible from the narrow limitations put upon it by purely logical deductive method. The fact that geometry is an art as well as a science, and was an art long before it became a science, has sometimes been lost sight of. We stand still too much under the influence of the powerful and absolutely unique impression made upon geometry by Euclid two thousand years ago. A student may go through any of our textbooks, and yet not be able to do anything with his geometry. It is only by solving innumerable problems that he learns to appreciate the meaning and the bearing of the propositions that he has studied and proved. I want especially to emphasize construction problems, which are too much neglected. They must really be solved, not merely by word of mouth and by reciting at the blackboard, but actually done on paper with ruler and compass. The construction should be nicely finished, in aesthetically attractive fashion. It is easy to arouse among the students a laudable ambition, a spirit of emulation as to who can produce the neatest work, which well repays whatever labor the teacher may have spent upon this aspect of their work. The metrical relations cannot be fixed in the memory beyond the peradventure of confusion without very many calculations, numerical and literal. The ignorance among most boys in regard to the metrical relations of the most interesting, perhaps, of all figures dealt with in plane geometry, the circle, is quite appalling, probably because the circle is treated last in the conventional scheme, at a time when everybody, teachers and students alike, are overloaded. We should not allow ourselves to be bound down by such artificial limitations. All the metrical relations of the circle can be made as clear as the most elaborate proof can make them by considerations that every student can follow, and after that there should be no difficulty in beginning work on the circle early enough to overcome once for all the confusion between πR^2 and $2\pi R$.

I want to say a few words on the graph. This is a comparatively new subject in this country, and it is quite plain that many teachers, and textbook-writers for that matter too, don't quite know what to make of it. Here as in other chapters of algebra the fruitfulness of the work depends altogether on what use you

make of it. Here as elsewhere it is possible to take it up in such a way that it is simply an addition to an already pretty full load, without any particular benefit.

In the first place, it is a better means than any yet devised for replacing the idea of *unknown quantity* by *variable quantity*. The former is comparatively barren; the latter is the mother of all further progress. It is the idea of functionality. It opens a new understanding of the solution of the equation, the root of an equation, the roots of simultaneous equations. It shows the student a way of getting at problems that are quite hard, and some of which are otherwise quite beyond his powers by any other method that he knows. Notwithstanding the apparent simplicity of the relation between time, rate, and distance, problems of motion are, as every teacher knows, hard for students to grasp. By means of the graph conditions can be simply stated and solutions arrived at in half the time and in a manner entirely delightful to the class. It is a very great pleasure to watch the tense attention, and at last the surprise and pleasure, on the faces of the class as the result appears. As a means for vivifying interest the graph is unsurpassed. The meaning of negative results in problems of motion can be made clearer than in any other way. For the solution of quadratic equations with one or two unknown quantities the graph is at its best. To me the conic sections have always been the source of considerable aesthetic pleasure. The solution of an equation is the solution of a riddle, and when it comes out, perhaps in the familiar form of a circle, or such a strange curve as the hyperbola, there is not a little pleasure in the result, quite apart from its algebraic meaning. After the idea has once been clearly grasped that the points whose coordinates fulfil the conditions imposed by the equation are limited to, or can move only on, such and such a line, a new meaning of the solution of the quadratic equation breaks out. By following out in detail the graphic figures corresponding to the successive operations performed in the solving of the equations, there appears an inkling of the reasons why certain things are done, why certain other things cannot be done, and why certain things, if done,



lead to too many or too few roots. A few diagrams that I have brought along with me will make my meaning clearer.

The first set of graphs illustrates the successive operations to be performed in the solution of the system of simultaneous equations

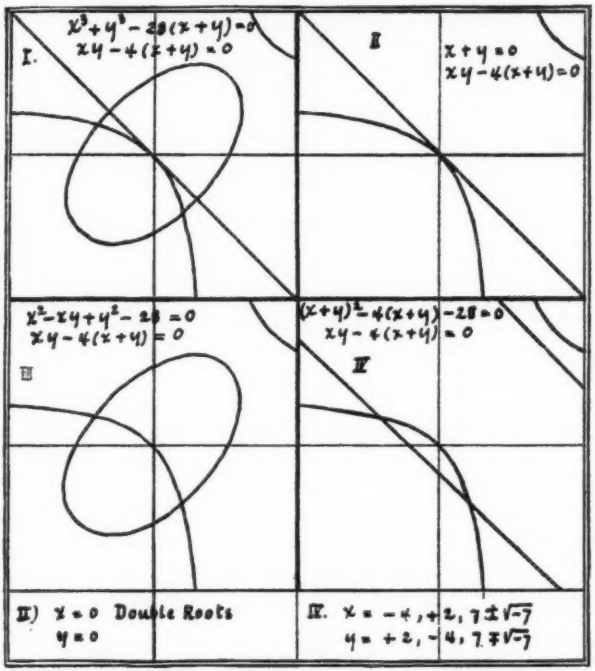
$$x+y=-2,$$
$$xy=-8;$$

the second illustrates in the same way the solution of the system

$$x^3+y^3-28\,(x+y)=0,$$
$$xy-4\,(x+y)=0.$$

The graphs of the latter are especially instructive. There ought to be six sets of solutions; two are real and different (intersection), two real and equal (tangency), two imaginary (failure to intersect).

All this is pure mathematics. But the graph allows us also to solve applied problems that could not easily be reached by algebra



at this stage. I anticipate a little physics and tell the class that a body falls during the first second 16 feet, during the next 4 times 16, and so on. Also that 32 feet is in physics denoted by the letter g. It does not take long to express the law stated numerically in literal notation:

$$s = \tfrac{1}{2}\, gt^2$$

A body is thrown into the air at a certain angle with the horizontal; at what point will it strike the ground? What is the greatest height it reaches? Plot its path. Next trace the course of another projectile, making the same angle with the verticle as the first does with the horizontal. It is interesting as well as surprising to the class that the two reach the ground at the same distance. It is at the same time a bit of information on ballistics that is not likely to be forgotten. Another problem: Of all the

rectangles with a given perimenter $2p$ which has the greatest area? The formula for the area is

$$y=x(p-x);$$

or

$$y=px-x^2,$$

the graph of which is, of course, a parabola with vertical axis, convexity turned upward. It gives the information desired for a particular case. A simple algebraic transformation gives to the equation the form

$$y=p/4-(p/2-x)^2$$

from which it appears that the maximum occurs when

$$x=\frac{p}{2};$$

that is, when the rectangle is a square. Armed in this way, both with algebra and the graph, the student may easily investigate other problems on maxima and minima, which do not lead to equations higher than the second degree, such as the converse of the one just mentioned: The area being given, what must be the relation between base and altitude, so that the rectangle may have the smallest perimeter?

But the graph is not limited to equations of the second degree. Curves of higher order are a trifle more laborious, but not essentially harder. Many problems from plane and solid geometry, even in cases where the equation to which they lead is of higher order than can be managed at this stage, can readily be treated by means of the graph, at least for definite numerical values.

Before closing I cannot forbear saying a few words regarding propositions for improvement in the teaching of mathematics that have been made abroad, especially by Professor Perry and by Professor Felix Klein. While Mr. Perry pleads for improvement and reform for the benefit of *all boys,* it becomes quite plain to anyone who has read the series of articles that he has published under the title *England's Neglect of Science,* his essay read before the British Association, and his *Syllabus of Mathematics,* that he pleads in the first, second, and third place for students such

as he has in his own institution—boys of the age of our high-school boys, following purely technical studies of much more ambitious scope than our manual-training schools pursue. Many of his proposals are extremely radical, and he presents them in a brilliant and most incisive way. The discussion of the subject of improvement in the teaching of mathematics held at the meeting of the British Association at Glasgow in 1901 is most interesting. It is published by The Macmillian Company, and costs but 65 cents. Mr. Perry's *Syllabus of Practical Mathematics* is published by Wyman & Sons (London, 1901). The pamphlet entitled *England's Neglect of Science,* though less interesting than the other two mentioned, is well worth reading. It is published by Fisher Unwin (London, 1900). All three are inexpensive. I may mention the fact that these, and a good many most interesting works on mathematics and the pedagogy of mathematics, are to be found in the Crerar Library, an institution which is collecting for us rich materials for investigation in science and mathematics, that no one can afford to overlook who can command the time for studying at a reference library. Professor Klein's essays, and those of his collaborators in his field, are well worth reading also. They are much more scholarly than Mr. Perry's, but their propositions concern more especially the higher classes of the German *Gymnasium* and those of the *Realschule* than schools of the grade we mean when we speak of secondary schools.

Professor Perry's books are instructive also from another standpoint, because of the light they throw incidentally on conditions in England. The reader is especially surprised at the extraordinary state of backwardness in the teaching of geometry that seems to prevail in England, owing to the, to us inconceivable, conservatism in the retention of Euclid as the sole and only textbook in geometry. Hence an everywhere prevailing impression that geometry is a subject supremely difficult, that can be mastered only by a few select minds. This crops out in the course of the discussion in the most amusing way. Hence also in the propositions for reform a curious underestimation of the educational value of geometry and what seems to us an overvaluation,

at least at this stage, of algebraic analysis. A committee of the British Association, appointed to report on the improvement in the teaching of mathematics, says in one place: "It may be felt convenient to retain Euclid; but perhaps *the amount to be memorized* might be curtailed." All through the discussion it appears that to all, or almost all, speakers it seems axiomatic that the same textbook must be used by all the schools in England, if geometry is to be taught at all; how else could there be examinations in geometry? The president of the section for mathematics and physics says: "I have tried to find out from those prominent in the Society for the Improvment of Mathematical Teaching what it really proposes as a substitute for Euclid, but without success." Professor Sylvanus Thompson says: "The teaching of arithmetic should follow a certain course, and pupils ought to be taught how to differentiate and to integrate simple algebraic expressions, before we attempt to teach them geometry and these other complicated things." Professor Perry, speaking of elementary geometry-teaching, says: "A good teacher will *occasionally* introduce demonstrative proof as well as mere measurement."

Surely, the English reformers' needs are not our needs; and while we may read their books with profit, and follow their struggles with sympathy, we must fight our own battles, and shape our ends according to our own needs.

EDITORIAL NOTES

EUROPEAN EDITORS AND CORRESPONDENTS

In accordance with the purpose announced a year ago, the *Review* has made arrangements to broaden its scope and increase its usefulness by adding to its staff representatives of leading European countries. The *Review* considers itself and its readers highly fortunate in the men who have consented to co-operate with the American editors. All of them have promised to contribute material. The article by Professor Schwarz in this issue will be followed in the February number by an article by Professor Friedel on Secondary School Problems in France. We subjoin brief notices of the new editors.

J. J. Findlay, M.A. Oxford, Ph.D. Leipzig, who will be advisory editor for Great Britain, has been professor of education in the University of Manchester since 1903. He studied at Kingswood School, Bath, Wadham College, Oxford, Jena, and Leipzig; was master of the modern side of Bath College 1884–85, also at Rugby School for short periods; was head master in succession of two Wesleyan proprietory schools—Queen's College, Taunton, and Wesley College, Sheffield, 1885–91. After a year in Germany he made an educational tour in the United States, and wrote a report as assistant commissioner to the royal commissioner on education, 1894; he was lecturer on education at the College of Preceptors, London, 1895–98, and head master for the Intermediate School for Boys, Cardiff, 1885–1903. His best known publications are *Arnold of Rugby* (1896), and *Principles of Class Teaching* (1902). Numerous articles and contributions have appeared in various publications from his pen.

Wilhelm Münch, Ph.D., geheimer Regierungsath, has been professor of pedagogy in the University of Berlin since 1897. Previous to this he had served as teacher or director in several *Gymnasia.* He has been a prolific and suggestive writer in the educational field, discussing both general and special problems. The latter class includes his contributions to the methods of modern language-teaching (1895, 1902). Among his works of a more general character are: *From the World and the School* (1888, 1900, 1904); *Spirit of the Pedagogy of the Future* (1904); *Spirit of the Teacher's Vocation* (1903, 1905).

Victor H. Friedel, B.A., B.Sc., Lic.Litt., Paris, Ph.D. Bonn, LL.D. St. Andrews, who will be the advisory editor for France, is a native of the Vosges country. His early training was classical and philological. In 1895 he received a call from the Senate of the University College of Liverpool to organize the Department of Romance and French Philology, and accepted

this appointment in preference to another offered him at the same time which would have brought him to Bryn Mawr. After having spent five years organizing, inspecting, and examining in the United Kingdom, devoting his holidays to scientific commissions in nearly all European countries, he was called back to France to organize, with Professor Ch. V. Langlois, the *owce d'information d'études* at the French Education department. His knowledge of foreign countries, languages, and schools fitted him for that special service, of which he is at present the head. He has not given up Romance philology, on which he lectures occasionally and writes constantly, but his main efforts at present bear on practical pedagogics; studies of school reforms published in French and foreign reviews or in daily papers; articles on school legislation and administration; administrative business concerning all orders of schools and school practice; the pedagogical library of the Musée Pédagogique at Paris; and the collections of pedagogical pedagogics, official documents, etc., which are placed under his care, are his main working instruments. Foreign visitors have always found a welcome and information at his office.

Ernesto Filippini, Litt.D., is professor in the royal Liceo-Ginnasio T. Mamiani, and inspector for the elementary schools of the city of Rome. He has held the professorship of literature in various *lycées,* including those of Siena and Pavia, and has been located at Rome since 1891. As general secretary of the dominical schools of Italy, he directs the quarterly periodical *La scuola domenicale,* and is editor of all the publications of the National Society of the Dominical Schools of Italy. He is further director of studies of the College of the Methodist Episcopal Church. He has published various contributions in reviews and separately upon religious, historical, and literary subjects, and in 1895 in recogniton of his services in education was made *Cavaliere dell' ordine della Corona d' Italia.*

Dr. Herrmann Schwarz, whose series of articles on experimental work in the field of education begins this month, is *Dozent* in the University of Halle. He is the author of numerous works in psychology and ethics, both historical and constructive.